Retrospective
2009 Queensland Core Skills Test
Foreword

The *Retrospective* is a yearly publication that provides detailed and wide-ranging feedback on the Queensland Core Skills (QCS) Test and the responses of students.

The core skills are the threads or common curriculum elements that are within the curriculum experience of at least 95% of students. The level of sophistication demanded by the test is appropriate for Year 12 students. It is a cross-curriculum test, which means that it does not test the content of specific subjects. Rather it tests the skills learnt from the combination of subjects in a balanced curriculum.

The QCS Test consists of four testpapers — a Writing Task, a Short Response paper and two Multiple Choice papers. Students experience a variety of stimulus material such as prose passages, poetry, graphs, tables, maps, mathematical and scientific data, cartoons, and reproductions of works of art.

The *Retrospective* is a definitive and descriptive report on the integration of the test specifications, the expectations of the testsetters, and the performance characteristics of the students. It also provides information on the relative worth of items on the test, data that allow the determination of student achievement on the test.

The *Retrospective* does not include copies of the testpapers. All schools receive copies of the testpapers during the administration of the QCS Test. Any individual or organisation requiring copies may buy these from the Queensland Studies Authority.

In addition to having value at school level, this publication should appeal to a wider audience. In fact, anyone interested in cross-curriculum testing is sure to find it informative.

Peter Luxton  
*Acting Director*
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Multiple Choice (MC) I & II

Commentary

In 2009 the MC subtest consisted of 100 items divided evenly across two testpapers, with 10 units on MC I and 10 units on MC II (overall there were 9 verbal units and 11 quantitative units, but equal numbers of verbal and quantitative items). A wide variety of common curriculum elements was tested again this year.

The table on pages 3–5 gives the name of each multiple choice unit on the MC subtest, the keyed response for each item, the basket to which the item is assigned, the facilities, as percentages, for each item and for each unit (rounded to the nearest whole number), the average facility for the MC subtest as a whole and the common curriculum elements tested in each unit.

A broad spectrum of stimulus materials was included this year, covering literature (Persuasion, McAuley), literary criticism (Lighthousekeeping), language (Experience), cartoons (Wally), civics and society (Self-obsession), history (French Revolution), art (New York Streets), popular culture (Villains), pure mathematics (Areas of Circles, Grid Paths), applied mathematics (Car Journey, Height Prediction, Unfolding Boxes), chemistry (Fertica), game theory (Abalone), genealogy (Family Tree), biology (Frog Calls) and environmental sciences (SEQ Dams, Carbon Dioxide Levels). A variety of text forms was represented as well, including short, medium and long verbal texts, tables, diagrams, paintings, illustrations, quotations, graphs and maps.

This year’s students found their MC subtest marginally harder than did last year’s cohort (average facility (F) on both testpapers, F = 0.52 (2009) and F = 0.53 (2008)). Average facilities for each testpaper were the same (F = 0.52); the average facility of verbal items was, at F = 0.49, considerably down on last year (F = 0.53), while the average facility of quantitative items was, at F = 0.55, slightly up on last year (F = 0.54). Students found none of the verbal units to be extremely challenging, with most units yielding average facilities between 0.4 and 0.6; the easiest was Family Tree, with F = 0.60. The quantitative units, by contrast, yielded a much broader spectrum of facilities: students found Unfolding Boxes very easy (F = 0.80), but struggled with Areas of Circles (F = 0.27) and Car Journey (F = 0.36); all other quantitative units yielded average facilities in the mid-range, from about 0.4 to 0.7.

Common Curriculum Elements (CCEs) and the MC format

Of the 49 CCEs, the following cannot be tested directly in MC format, though a few—such as graphing, summarising and manipulating equipment—may be tested at “second order” (i.e. indirectly):

- 11 Summarising/condensing written text
- 12 Compiling lists/statistics
- 13 Recording/noting data
- 14 Compiling results in a tabular form
- 15 Graphing
- 20 Setting out/presenting/arranging/displaying
- 21 Structuring/organising extended written text
- 22 Structuring/organising a mathematical argument
- 26 Explaining to others
- 27 Expounding a viewpoint
- 46 Creating/composing/devising
- 53 Observing systematically
- 55 Gesturing
- 57 Manipulating/operating/using equipment
- 60 Sketching/drawing.

These CCEs can be validly tested in Short Response (SR) format.
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<td>$\Theta$</td>
<td>34</td>
<td>42</td>
<td>4 Interpreting the meaning of words ... 10 Using vocabulary appropriate to a context 33 Reaching a conclusion which is consistent with a given set of assumptions 43 Analysing</td>
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<tr>
<td></td>
<td>81</td>
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<tr>
<td>18 Abalone</td>
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<td>$\beta$</td>
<td>35</td>
<td>49</td>
<td>32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true 36 Applying strategies to trial and test ideas and procedures 45 Judging/evaluating 49 Perceiving patterns 50 Visualising</td>
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<tr>
<td></td>
<td>91</td>
<td>D</td>
<td>$\Theta$</td>
<td>54</td>
<td></td>
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<tr>
<td>19 Villains</td>
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<td>A</td>
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<td></td>
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<td>$\beta$</td>
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<td>$\Theta$</td>
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<td></td>
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<td>$\beta$</td>
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<td></td>
</tr>
<tr>
<td>20 Carbon Dioxide Levels</td>
<td>98</td>
<td>B</td>
<td>$\phi$</td>
<td>47</td>
<td>53</td>
<td>6 Interpreting the meaning of ... graphs 17 Estimating numerical magnitude 35 Extrapolating</td>
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<td></td>
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<td>C</td>
<td>$\alpha$</td>
<td>47</td>
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<td>B</td>
<td>$\Theta$</td>
<td>65</td>
<td></td>
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</tr>
</tbody>
</table>

Notes: The order of the CCEs tested for each unit does not reflect the order of the items, nor does it imply a cognitive hierarchy.
Rarely does an item require the use of only one CCE, hence a suite of the dominant CCEs that are tested in a unit are listed.
The baskets into which CCEs are grouped are shown in Appendix 2.
For an item, the facility (F) is the proportion of students who gave the correct response. For a unit, the average facility (AF) is the average of the facilities of all items in that unit.
Short Response (SR)

Commentary
This year's SR subtest comprised 17 items across eight units. As students worked through each unit, they interacted with challenging and engaging stimulus material. Test developers paid careful attention to framing each item in a way that made it accessible to most students. The SR testpaper comprised units with stimulus material selected from fields as diverse as mathematics, logic, astronomy, literature, physical and social sciences and visual arts.

This year’s paper was again varied in its content, covering a broad range of CCEs. The different tasks included creating a chart to be used as a ready reckoner, interpreting illustrations by graphic artists, understanding features of a method to solve some logic problems, investigating various aspects of hair growth, providing an entry for a travel journal, considering the inconsistencies in a photograph, and analysing an extract that draws parallels between generations. These tasks aimed to interest students and impart knowledge while assessing student achievement.

Model responses and commentaries on student performance
What follows is an item-by-item discussion that includes model responses and marking schemes, tables and graphs of the distributions of grades and commentaries that discuss how students handled the tasks and that give suggestions which might help students be better prepared. At times, references to specific student responses are included to exemplify observations. Model responses are those that demonstrate a high level of performance and would have been awarded the highest grade, A.

For some items, especially the more open-ended items, responses were extremely varied. For these it is not possible to provide examples of the many ways in which students responded. The detailed, item-specific marking schemes indicate the scope of acceptability of responses. Even for the more closed items the marking schemes demonstrate that different ways of perceiving “the solution” were able to gain credit.

Marking schemes
The marking schemes used during the marking operation and included in this section of the Retrospective are not designed to be read in isolation. They are but one element of the marking prescription. During the marking operation markers undergo rigorous training in how to apply the marking schemes to student responses of one marking unit. The training involves careful consideration and application of the material presented by immersers.

For organisational purposes during the marking operation, the testpaper units were grouped into five marking units. In 2009, Marking Unit 1 contained testpaper units One and Five, Marking Unit 2 contained testpaper units Two and Three, Marking Unit 4 contained testpaper units Four and Six, Marking Units 7 and 8 contained testpaper units Seven and Eight, respectively.
## SR 2009 summary

<table>
<thead>
<tr>
<th>Unit</th>
<th>Item</th>
<th>Basket</th>
<th>Common Curriculum Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Faked</td>
<td>1</td>
<td>β</td>
<td>30 Classifying 50 Visualising</td>
</tr>
<tr>
<td>Two Hairy</td>
<td>2</td>
<td>φ</td>
<td>16 Calculating with or without calculators</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17 Estimating numerical magnitude</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19 Substituting in formulae</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>φ</td>
<td>26 Explaining to others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33 Reaching a conclusion which is consistent with a given set of assumptions</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>θ</td>
<td>43 Analysing</td>
</tr>
<tr>
<td>Three Logic puzzle</td>
<td>5</td>
<td>θ</td>
<td>7 Translating from one form to another</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26 Explaining to others</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>θ</td>
<td>32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true</td>
</tr>
<tr>
<td>Four Away from home</td>
<td>7</td>
<td>α</td>
<td>28 Empathising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31 Interrelating ideas/themes/issues</td>
</tr>
<tr>
<td>Five Comet</td>
<td>8</td>
<td>φ</td>
<td>6 Interpreting the meaning of ... diagrams ...</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>α</td>
<td>7 Translating from one form to another</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16 Calculating with or without calculators</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>φ</td>
<td>32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>37 Applying a progression of steps to achieve the required answer</td>
</tr>
<tr>
<td>Six Begetting violence</td>
<td>11</td>
<td>β</td>
<td>29 Comparing, contrasting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31 Interrelating ideas/themes/issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45 Judging</td>
</tr>
<tr>
<td>Seven Medals</td>
<td>12</td>
<td>α</td>
<td>2 Finding material in an indexed collection</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>α</td>
<td>15 Graphing</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td>16 Calculating with or without calculators</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>θ</td>
<td>20 Setting out/presenting/arranging/displaying</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>θ</td>
<td>26 Explaining to others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>θ</td>
<td>43 Analysing</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>α</td>
<td>46 Creating/composing/devising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>43 Analysing</td>
</tr>
</tbody>
</table>

Note: CCEs specific to an item are listed on the item’s marking scheme. The baskets into which CCEs are grouped are shown in Appendix 2.
Unit One

This single-item unit was based on a faked photograph. The stimulus material consisted of a photograph of a bridge over a river which had been made fake by the inclusion of the image of a helicopter from another source. It was stated that checking for visual inconsistencies was a method that could help identify photographic fakes. A list of categories that visual inconsistencies could be considered under was given with an explanation of each.

The following table shows the percentage of students who achieved the various grades for the item in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>16.4</td>
<td>13.9</td>
<td>32.6</td>
<td>28.3</td>
<td>2.8</td>
<td>5.7</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Item 1

Model response

Study the faked photograph on the opposite page.

Give details of three visual inconsistencies — each from a different category — which would provide convincing evidence that the photograph is fake.

For each inconsistency state the category to which it belongs.

- Remnants of blue sky in the cockpit glass and...
- between portions of the landing gear — category 4.
- It is unusual that no one is looking at the very close...
- helicopter — category 2.
- Shadows on the bridge are angled as if the sun is...
- shining from the right but the glare on the cockpit...
- glass makes the sunlight appear to be coming from...
- the left — category 1.
Item 1, a three-star item, required students to give details of three visual inconsistencies—each from a different category—which would provide convincing evidence that the photograph is fake. For each inconsistency students had to state the category to which it belongs.

This item tested achievement in CCE 50 Visualising and CCE 30 Classifying. Student engagement in this item was very high and most students experienced success.

Almost all students attempted this item with just over 16% of responses being awarded an A-grade. To achieve this grade the response had to provide details of three valid visual inconsistencies (VI), each VI had to be from a different category and had to be explicitly and correctly categorised. To be a VI the information given had to relate to the helicopter and be evidenced in the photograph. The majority of responses recognised that the inclusion of the helicopter was what made the photograph fake. The details of the valid VI had to give sufficient information to convince without assumptions or inferences being made.

Several inconsistencies were evidenced in the photograph and contributed towards the higher grades in the item. Some examples are: for category 1 – the sun simultaneously shining from two directions as shown by the shadows of the pedestrians and the bridge railings and the glare on the helicopter windscreen, for category 2 – the complete lack of interest in the helicopter by the pedestrians on the bridge or the registration mark on the side of the helicopter with the letters reversed, for category 4 – remnants of a different colour sky from a previous photograph still visible in the cockpit and struts of the helicopter or the blade showing the straight edge from the border of the previous photograph.

After giving the details of the VIs students generally went on to categorise correctly the three VIs they provided. Each had to be from a different category for an A-grade to be awarded. Lower grades depended on the number of valid VIs or plausible VIs provided, whether they were from different categories and had been categorised. Students are reminded to read the stem carefully as a valid VI was deemed to be plausible when assumptions or inferences had to be made because there was not enough detail supplied in the response while other VIs were regarded as plausible rather than valid because they relied on assumptions about, rather than evidence from, the photograph.

As visual inconsistencies were required discussions about the safety and legal aspects of low flying aircraft were not given credit. References to the helicopter being too big or too small based on scale were made by some students but as an assumption about the correct size of the helicopter would have to be made and could not be confirmed by information in the photograph this was not accepted as a valid or a plausible VI.
# UNIT ONE ITEM 1

## PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>The response provides three VALID visual inconsistencies (VI). Each VI is from a different category and is correctly categorised.</td>
<td>The response provides two VALID VIs. <strong>AND</strong> one PLAUSIBLE VI. Each VI is from a different category and is correctly categorised.</td>
<td>The response provides two VALID VIs. Each of these two VIs is from a different category and is correctly categorised. <strong>OR</strong> The response provides three VALID VIs. <strong>OR</strong> The response provides three VALID VIs.</td>
<td>The response provides at least one VALID VI. This VI is correctly categorised. <strong>OR</strong> The response provides two PLAUSIBLE VIs. Each VI is correctly categorised. <strong>OR</strong> The response provides three VALID VIs.</td>
<td>The response provides at least one VALID VI. This VI is correctly categorised. <strong>OR</strong> The response provides two PLAUSIBLE VIs. Each VI is correctly categorised. <strong>OR</strong> The response provides one VALID VI.</td>
</tr>
</tbody>
</table>

## Marking Scheme

<table>
<thead>
<tr>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td>No response has been made at any time.</td>
</tr>
</tbody>
</table>

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**Model Response:**

- Remnants of blue sky in the cockpit glass and between portions of the landing gear — category 4.
- It is unusual that no one is looking at the very close helicopter — category 2.
- Shadows on the bridge are angled as if the sun is shining from the right but the glare on the cockpit glass makes the sunlight appear to be coming from the left — category 1.
UNIT ONE ITEM 1

Notes:
1. VISUAL INCONSISTENCY (VI)
   • relates to the helicopter
   • is evidenced in the photograph

VALID VI
— response gives sufficient information to convince, without assumptions or inferences being made.

Some Examples
• People are not looking at helicopter when it is close. (2 — Association)
• Sections of blue are apparent in helicopter from cutting and pasting the helicopter from another photo. (4 — Remnants)
• Glare on front of helicopter when shadows on bridge indicate sun from another direction. (1 — Light and Shadow)
• “Registration mark” on helicopter has the letters reversed. (2 — Association)
• Clothes/hair not blowing around when helicopter’s rotors are so close. (2 — Association)
• Cropped front rotor blade on helicopter. (4 — Remnants)

PLAUSIBLE VI
— response does not supply enough information to convince without assumptions or inferences being made.

Some Examples
• Wave disturbance or ripples on water from helicopter are not visible. (2 — Association)
• Shadow of helicopter on bridge is not visible. (1 — Light and Shadow)
• Glare on helicopter is wrong. (1 — Light and Shadow)

2. A VALID VI is automatically included as a PLAUSIBLE VI.
Unit Two

This unit looked at two of the factors that govern the number of hair strands on a human scalp, the size of the head and the natural colour of the hair. The stimulus material included a table showing the approximate number of hair strands per square centimetre of scalp for four natural hair colours (blonde, black, brunette and red). The unit also provided a formula that could be used to find the total surface area of a head with a given circumference. Students were informed that the average female head circumference is 56.5 cm and the average male head circumference is 59 cm. It was also given that, for both males and females, the area of scalp is 65% of the total surface area of the head.

The following table shows the percentage of students who achieved the various grades for the items in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<th>O</th>
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<td>20.1</td>
<td>17.1</td>
<td>6.2</td>
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<td>8.9</td>
<td>8.3</td>
<td>14.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Item 4</td>
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<td>18</td>
<td>8.3</td>
<td>17</td>
<td>15.3</td>
<td>5.7</td>
</tr>
</tbody>
</table>

Item 2

Model response

Calculate the scalp area of an average adult male.

Show all steps. Round your result to one decimal place.

Average adult man, \( T = \frac{11 \times 59^2}{31} \)

\[ = 1235.2... \]

Scalp area = \( 0.65 \times 1235.2... \)

\[ = 802.9 \]
Commentary

This two-star item required students to calculate the scalp area of an average adult male and tested achievement in CCE 19 Substituting in formulae and CCE 16 Calculating with or without calculators. It was an item with a straightforward mode of response with 46% of responses being awarded an A-grade. The omit rate was quite low.

Students were told in cues to show all steps and to round their final answer to one decimal place. By far the most common error that occurred in students' working was that of inappropriate rounding. If this was the only error the response could be awarded a B-grade.

If students were able to demonstrate substitution into the formula for T and could also arrive at the total surface area of the head, 1235.2 cm² they were given the second lowest creditable grade for this item, a C-grade. It was unfortunate that a number of students did stop their calculations at this point. It appears that the stimulus had not been read carefully enough for them to realise they were required to go further than the formula and find 65% of the area found for T to find the scalp area.

Of those students who did attempt to find the scalp area some serious errors in calculating the percentage occurred such as dividing by 65 then multiplying by 100 or finding the 65% but then subtracting this amount from T and therefore only finding 35%. Students should endeavour to have a clear understanding of the various uses of percentage in problems and be able to use their calculator efficiently.

Students who did not obey the cue to show all steps but were able to provide the correct answer of 802.9 (or its equivalent as described in the notes in the marking scheme) achieved a C-grade which is unfortunate as presumably they have been able to do the substitution and calculations but did not supply evidence of it as instructed. It is important for students to realise that when requested to “show all steps” this is necessary to be awarded the higher grades. The phrase “or its equivalent” allowed students to gain a C-grade even if they had not rounded correctly. Many items ask for results to a specific number of decimal places and students should be aware of how to produce the required accuracy. It is important to note that rounding should only be done at the last step as rounding throughout a problem can result in the answer being quite inaccurate as each time you round some accuracy is lost.

Students whose working included operational misconceptions could at best receive a C-grade if they were then able to provide evidence of finding the 65% of what they thought was the calculated head area. Operational misconceptions, such as calculating 59² as 59 x 2 and incorrect execution of order of operations when (11 x 59)² was calculated instead of 11 x 59² were not regarded as mechanical errors but were seen as more serious in terms of whether the student was able to demonstrate achievement in calculating.
## UNIT TWO  ITEM 2

### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>19</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substituting in formulae</strong></td>
<td><strong>Calculating with or without calculators</strong></td>
</tr>
</tbody>
</table>

### MARKING SCHEME

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>N</td>
</tr>
</tbody>
</table>
| The response provides 802.9 as the scalp area and shows that it results from:  
- correct substitution into the given formula  
- correct calculation of 65 per cent of the head area.  
No incorrect working is shown. | The response provides an answer for the scalp area that would have been correct except for at most one mechanical error and shows that it results from:  
- correct substitution into the given formula  
- calculation of 65 per cent of the head area. | The response includes 1235.2 or its equivalent and shows that it results from correct substitution into the given formula.  
------- OR -------  
The response provides evidence of:  
- correct substitution into the given formula  
- an attempt to find 65 per cent of a calculated head area.  
------- OR -------  
The response provides 802.9 or its equivalent as the scalp area. | The response includes 1235.2 or its equivalent.  
------- OR -------  
The response provides evidence of substitution into the given formula.  
------- OR -------  
The response provides a consequentially correct answer for the calculation of 65 per cent of a nominated value. | Response is unintelligible or does not satisfy the requirements for any other grade. | No response has been made at any time. |

### Notes:

1. Mechanical errors can include such errors as inappropriate rounding, transcription or arithmetic but do not include operational misconceptions.
2. “or its equivalent” allows for correct digits to whatever number of decimal places the response gives. Truncation is acceptable.

### Model Response:

Average adult man, \( T = \frac{11 \times 59^2}{31} = 1235.2 \ldots \)

Scalp area = \( 0.65 \times 1235.2 \ldots = 802.9 \)
Item 3

Model response

Naturally healthy scalp hair has a life cycle of about four years. As hairs reach the end of their life cycle they fall out and are replaced. However, rather than all hairs being lost at once some are lost every day.

What is the average number of hair strands lost per day by a blonde person with a scalp area of 736 cm$^2$?

\[
\text{Hair strands} = \frac{190 \times 736}{736} = 139840
\]

\[
\text{Days in 4 years} = 4 \times 365 = 1460
\]

\[
\frac{139840}{1460} = 95.7... \approx 96
\]
This three-star item required students to find the average number of hair strands lost per day by a blonde person with a scalp area of 736 cm$^2$. The stem of the item provided the information that healthy scalp hair has a life cycle of about four years. This item tested achievement in CCE 17 Estimating numerical magnitude, CCE 43 Analysing and CCE 16 Calculating with or without calculators.

Once again the students were instructed via a cue to show all steps. The rounding required in this item was appropriate to the task set, giving the number of hairs lost to the nearest whole number of strands per day.

To arrive at the required answer, students needed to refer to the table to find the number of blonde hair strands per cm$^2$ of scalp, calculate the total number of strands on the given scalp by multiplying 736 by 190 and then determine the number of hairs lost each day over the four year period. This could be found by either dividing the total strands by the calculated total number of days in four years or by finding the strands lost per year followed by the strands lost per day (some students went year, month, week and then day).

While within any four years there is always a leap year, students were not penalised if they failed to recognise this. Hence 1460 or 1461 could be used as the number of days in four years to gain the A-grade. Surprisingly a sizeable number of students could not remember that there are 365 days in a normal year and 366 in a leap year. Responses using any of 336, 356, 360, 364 or 366 as the days per year were deemed to have made one mistake and if everything else was correct the response was able to be awarded a B-grade.

Students were required to show all working when calculating the total number of strands e.g. $736 \times 190 = 139,840$ and the number of days in four years e.g. $365 \times 4 = 1460$. Failure to show either of these calculations or something equivalent in relation to the days was counted as an error of inference as anyone viewing the response had to infer that to arrive at the values the correct calculations must have been done. Once again students are reminded that they should show the steps they execute on their calculators in the response area to gain the highest grades when the cue demands, “show all steps”. As partial credit can often be given for parts of the response that indicate some achievement in the CCEs being tested, it is a good habit for students to always show the steps taken towards a result.

A small proportion of students failed to include in their calculations division by 365 or 4 when determining the strands lost per day while a few, for some reason, introduced an extra division by 4. These errors were considered to be steps omitted or repeated and the highest grade that could be awarded for this type of response was a D-grade. Students should be encouraged to check for accuracy and for the reasonableness of a result once they have completed an item.
UNIT TWO  ITEM 3

PERFORMANCE DOMAIN

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
</table>
| A | The response gives 96 as the number of strands lost per day and shows that it results from:  
   - correct application of the process  
   - correct calculations. |
| B | The response gives a number of strands lost per day and shows that it results from:  
   - correct application of the process with at most one mistake  
   - consequentially correct calculations. |
| C | The response gives a number of strands lost per day and shows that it results from:  
   - correct application of the process with at most two mistakes  
   - consequentially correct calculations.  
   OR  
   The response gives 96 as the number of strands lost per day. |
| D | The response gives a number of strands lost and shows that it results from:  
   - application of the process with one step omitted or repeated  
   - at most one mistake  
   - consequentially correct calculations.  
   OR  
   The response gives a number of strands lost and shows that it results from:  
   - consequentially correct calculations.  
   OR  
   The response gives 96 as the number of strands lost per day. |
| E | The response includes 139 840.  
   OR  
   The response includes 1460 (or 1461). |
| N | Response is ineligible or does not satisfy the requirements for any other grade. |
| O | No response has been made at any time. |

Notes:

1. There is no penalty if the leap day is not taken into account for the number of days in four years.
2. The process involves calculation of the number of strands of hair by multiplying 190 by 736 then determining the appropriate rate, i.e. strands/day. Determining the rate can be done by:  
   - finding the number of days by multiplying 4 by 365 then dividing the number of strands by the result of that multiplication or  
   - finding the strands/year by dividing by 4 then the strands/day by dividing by 365.
3. Mistakes referred to in the descriptors are inappropriate rounding, reasonable transcription errors, calculation errors, inference necessary, the use of any one of the numbers below for the number of days in a year (no other values are accepted):  
   - 336  
   - 356  
   - 360  
   - 364  
   - 366.

Model Response:

\[
\text{Hair strands} = 190 \times 736 = 139840  
\text{Days in 4 years} = 4 \times 365 = 1460  
\text{Strands/day lost} = \frac{139840}{1460} = 95.7... = 96
\]

Marking Unit 2  2 of 6
**Item 4**

**Model response**

A certain adult human is known to have approximately 80000 strands of red hair on their scalp.

Is the person more likely to be a female or a male? Explain how you came to your conclusion.

**The person was most likely a female because the scalp area for the person in question is closer to a female scalp area than a male’s. The assumption is the person was not balding.**

\[
\text{Scalp area} = \frac{80000}{112} = 714.28...
\]

\[
\text{Average male scalp area} = \frac{11 \times 59^2}{31} \times 0.65 = 802.87...
\]

\[
\text{Average female scalp area} = \frac{11 \times 56.5^2}{31} \times 0.65 = 736.27...
\]

**Commentary**

Item 4, a reasonably demanding three-star item, required students to investigate whether a scalp with 80000 strands of red hair is more likely to have come from a female or a male and to explain how this conclusion was reached. They were to support the conclusion with calculations and were also to mention a factor that might have a bearing on their conclusion.

This item tested achievement in CCE 33 Reaching a conclusion which is consistent with a given set of assumptions, CCE 26 Explaining to others and CCE 16 Calculating with or without calculators. Almost all students attempted this item with almost 6% of responses being awarded an A-grade.

The A-grade response concluded that the person was more likely to be female, supported conclusions with correct calculations based on correct data, explained the reason/s for the conclusion and stated an acceptable factor.

Students performed relevant calculations in a number of different ways. The three most common were:

- calculating the scalp areas of the average male, the average female and the given person and comparing these areas
- calculating the number of strands on the average male and average female scalps and comparing the results to 80000
- calculating the head circumference of the given person and comparing this result to the values for the average male and female head circumferences, which were given in the original stimulus material.

For B-grade and lower, certain lapses in accuracy and fullness of explanation were tolerated. Students who used an incorrectly calculated value for the scalp area of an average male from their attempt at Item 2 were deemed to have made one error. It should be noted that items in the Short Response testpaper are independent of other items in the unit and never depend on responses to other items. Students should be wary of using data they have generated elsewhere or should at least repeat the calculations as a check. Errors could occur in the use of data, for example using the wrong hair colour from the table or in the calculations.
The explanation of how the chosen calculations were relevant to the conclusion reached was an important part of the response.

The B-grade requirements allowed for up to two errors in calculations, or for the factor or the explanation to be omitted. Many students gained a B-grade rather than an A-grade because the explanation of their conclusion did not compare the results of their calculations but simply stated that the calculations showed the person was female. Students should ensure that when they are asked to explain something, they do so clearly and fully, leaving nothing to be assumed or inferred. Many students omitted to mention a factor, an instruction in the second cue. Acceptable factors that were mentioned included: men tend to have more hair loss or baldness, not all head sizes are the same - averages were used, hair numbers may vary with a person's age, the person's health or lack of health could have a bearing on the number of strands, and hair could be dyed. That the person may have been a child was not acceptable as the stimulus material indicated the person was an adult. As stated in the Student Information Bulletin (a useful document to help students prepare for the QCS Test) cues provide essential further instructions on how to respond. Students who did not supply a factor could, at best, be awarded a B-grade. When a response is complete students should check to make sure all instructions in the stem and the cue(s) have been followed to give the best chance of attaining the highest grade.

If the student had errors in their calculations, their conclusion may have been that the person was more likely to be male or that no conclusion could be made because the numbers were inconclusive. This was acceptable at the lower grades provided that the conclusion was consistent with the calculations supplied.

The marking scheme allowed for a C-grade to be awarded in four ways. Students could conclude that the person was female, and support this with correct calculations based on correct data. They could provide a conclusion supported by calculations with at most two errors and explain the reason for the conclusion. They could provide a conclusion, supported by calculations with at most two errors and state an acceptable factor. Lastly, they could include full relevant calculations and state an acceptable factor.

The D-grade requirements allowed the student to have at most two errors in calculations and provide a relevant conclusion or an acceptable factor or to provide correct relevant calculations based on correct data.

To obtain an E-grade, students were able to conclude that the person was most likely to be female, giving a reason based on data for the conclusion or state an acceptable factor or provide at least one calculation which could have been useful. Some students omitted this item. It can be seen by the ways the marking scheme allows for partial credit to be awarded, that it is worth attempting an item, and responding to part of the stem or cue(s) even if a student is not confident of being able to achieve the final result.
UNIT TWO ITEM 4
PERFORMANCE DOMAIN

MARKING SCHEME

33 Reaching a conclusion which is consistent with a given set of assumptions
16 Calculating with or without calculators

A

The response
• concludes that the person was most likely to be female
• explains the reasons for the conclusion
• states an acceptable factor.

B

The response
• concludes that the person was most likely to be female
• supports conclusion with data
• states an acceptable factor.

C

The response
• provides a conclusion
• supports conclusion with correct calculations based on correct data.

D

The response
• concludes that the person was most likely to be female
• supports conclusion with data
• explains the reasons for the conclusion
• states an acceptable factor.

E

The response
• concludes that the person was most likely to be female
• gives a reason, based on data, for the conclusion
• states an acceptable factor.

Notes:
1. “Provides a conclusion” could be a statement saying the person was a male or a female or that no conclusion could be made. The conclusion provided must correspond to the calculations shown.

2. Errors may be in the calculations and/or in the data used.
UNIT TWO ITEM 4

Model Response:

The person was most likely a female because the scalp area for the person in question is closer to a female scalp area than a male's.
The assumption is the person was not balding.

Scalp area = \frac{80000}{112} = 714.28 \ldots

Avg male scalp area = \frac{11 \times 59^2}{31} \times 0.65 = 802.87 \ldots

Avg female scalp area = \frac{11 \times 56.5^2}{31} \times 0.65 = 736.27 \ldots

Calculations — scalps

Avg scalp area male = 802.9 cm²

Avg scalp area female = 736.28 cm²

For '80000' scalp area = \frac{80000}{112} = 714.29 cm²

714.29 cm² is closer to 736.28 cm² \therefore female.

Calculations — strands

Avg scalp area male = 0.65 \times \frac{11 \times 59^2}{31} = 802.9 cm²

Avg scalp area female = 0.65 \times \frac{11 \times (56.5)^2}{31} = 736.28 cm²

Strands male = 802.9 \times 112 = 89922

Strands female = 736.28 \times 112 = 82463

Avg hairs female much closer to 80 000 than avg hairs male \therefore female.

Circumference

\therefore T = \frac{714.29}{0.65} = \frac{11C^2}{31}

1098.9 = \frac{11C^2}{31}

55.6 cm = C

Circumference is closer to 56.5 cm \therefore female.

Marking Unit 2 4 of 6
Unit Three

The items in this unit involved the use of labelled grids to record information given in, and deduced from, clues provided. As clues about the available options were interpreted, ticks and crosses could be placed in the cells of a grid to record information that was correct and not correct respectively. The grids have three sections. Recording information in all three sections allows all options to be cross-referenced against each other.

The following table shows for each item the percentage of students who achieved the various grades for the items in this unit.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 5</td>
<td>31.2</td>
<td>16.5</td>
<td>38.2</td>
<td>11.4</td>
<td>2.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Item 6</td>
<td>21.1</td>
<td>17.4</td>
<td>14.4</td>
<td>29.1</td>
<td>13.6</td>
<td>4</td>
</tr>
</tbody>
</table>

Item 5

Model response

I. In Figure 1 a tick is placed in the *Meera-blue* cell to record the information that Meera does live in the blue house. Explain clearly why the crosses can be placed where they are in Figure 1.

As each option can only be used once, the vertical crosses show the deduced information that since Meera is in the blue house nobody else can live in that house.

The horizontal crosses record the deduction that Meera cannot live in any of the other houses.

II. The clue is extended to read —

*Meera lives in the blue house but does not own a dog.*

In the grid from Figure 1, which is repeated below, appropriately record the further information given in, and able to be deduced from, the extended clue.

<table>
<thead>
<tr>
<th>red</th>
<th>grey</th>
<th>blue</th>
<th>pink</th>
<th>fish</th>
<th>cat</th>
<th>bird</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meera</td>
<td>X</td>
<td>X</td>
<td>✔</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paul</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chan</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elli</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fish</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bird</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dog</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This three star item, which students found reasonably demanding, had two parts. Part I required students to interpret a single clue and explain clearly why the crosses can be placed where they are. Part II extended the initial clue and asked students to appropriately record the further information given in, and deduced from, this clue in the grid provided. The stimulus material included the situation for the puzzle, that is, each of the four people live in a house of a different colour and each owns a different pet. The essential information that each option can be used once and once only was printed in bold to ensure it was seen as important when solving these types of puzzles.

This item tested achievement in CCE 32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true and CCE 26 Explaining to others. Most students found this item accessible with fewer than 3% of responses being given a non-contributory grade. Approximately 31% of students achieved an A-grade.

To be awarded an A-grade, in Part I of the response the student had to clearly explain why the crosses in both the horizontal row and the vertical column were placed where they were.

To answer the why part of the question the response had to include a direct reference to either the information given in the introduction i.e. “each person lives in a different coloured house ... each owns a different pet”, or the fact that “each option can be used once and once only”. In Part II students had to appropriately record the further information given in, and deduced from, the extended clue by placing two crosses in the grid. From the information given in the clue one tick should be placed in the Meera-dog cell and from information deduced one tick should be placed in the dog-blue cell. No other ticks or crosses could be recorded on the grid.

The most common mistake was that of a response that did not indicate why the crosses were positioned as they were but simply interpreted the placement of the crosses, for example “the cross in the Paul-blue cell means Paul does not live in the blue house.” Another common error was only placing one cross. Usually this was the one in the Meera-dog cell which showed that the information given could be correctly recorded but that the student had missed the information able to be deduced such as, since Meera lives in the blue house but does not own a dog, it follows that the dog cannot live in the blue house.

Responses that had full explanations for Part I and only a single correctly positioned cross for Part II were awarded a B-grade. A number of students gave responses in which they explained why crosses were placed in either the “blue” column (vertical) or the “Meera” row (horizontal), but not both, but placed the two required crosses in the grid for Part II of the item. These were also awarded a B-grade.

Responses that explained why the crosses were placed in either the “blue” column or the “Meera” row and had only one cross appropriately placed on the grid received a C-grade.

A C-grade was also awarded to a response that, in Part I clearly explained why the crosses in both the row and the column were placed where they were. By far the most common C-grade response was awarded for responses that provided an interpretation of both row and column crosses and had at least one of the required crosses correctly placed on the grid. Another very common C-grade response had no creditable response for Part I but had the two required crosses correctly placed on the grid.

The D-grade could be awarded in three ways: a response that explained why the crosses in one of either the row or the column were placed where they were, a response that provided an interpretation of both row and column crosses and a response that showed, in Part II, at least one of the crosses correctly placed.
# UNIT THREE ITEM 5

## PERFORMANCE DOMAIN

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
</table>
| A | The response explains why the crosses in the “blue” column and the “Meera” row are placed where they are.  
**AND**  
The two required crosses are correctly placed on the grid.  
No other ticks or crosses are recorded on the grid. |
| B | The response explains why the crosses in the “blue” column and the “Meera” row are placed where they are.  
**AND**  
One of the required crosses is correctly placed on the grid.  
No other ticks or crosses are recorded on the grid.  
**OR** |
| C | The response explains why either the crosses in the “blue” column or the “Meera” row are placed where they are.  
**AND**  
One of the required crosses is correctly placed on the grid.  
No other ticks or crosses are recorded on the grid.  
**OR** |
| D | The response explains why either the crosses in the “blue” column or the “Meera” row are placed where they are.  
**OR** |
| N | Response is unintelligible or does not satisfy the requirements for any other grade. |
| O | No response has been made at any time. |

## Notes:
1. “explains why” requires the response to mention in some way that each option can only be used once.
2. “interprets the positions” means the response simply tells what information the crosses give but not why they are where they are.
3. The crosses in the “blue” column refer to the crosses in the Paul-blue, Chan-blue, Elli-blue cells.  
The crosses in the “Meera” row refer to the crosses in the Meera-red, Meera-grey and Meera-pink cells.

## Model Response:

I. As each option can only be used once, the vertical crosses show the deduced information that since Meera is in the blue house nobody else can live in that house.  
The horizontal crosses record the deduction that Meera cannot live in any of the other houses.

II.  

<p>| | | | | | | | |</p>
<table>
<thead>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meera</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Paul</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elli</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>fish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bird</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dog</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### Marking Scheme

- **A**: The response explains why the crosses in the “blue” column and the “Meera” row are placed where they are.  
  **AND**  
The two required crosses are correctly placed on the grid.  
  No other ticks or crosses are recorded on the grid.

- **B**: The response explains why the crosses in the “blue” column and the “Meera” row are placed where they are.  
  **AND**  
  One of the required crosses is correctly placed on the grid.  
  No other ticks or crosses are recorded on the grid.  
  **OR**

- **C**: The response explains why either the crosses in the “blue” column or the “Meera” row are placed where they are.  
  **AND**  
  One of the required crosses is correctly placed on the grid.  
  No other ticks or crosses are recorded on the grid.  
  **OR**

- **D**: The response explains why either the crosses in the “blue” column or the “Meera” row are placed where they are.  
  **OR**

- **N**: Response is unintelligible or does not satisfy the requirements for any other grade.

- **O**: No response has been made at any time.

### Marking Unit 2 5 of 6

Last Page Count: 
Item 6

Model response

Another puzzle involves a different group of four people — Jesse, Jae, Jack and Joni. Each likes a different subject (history, maths, drama or science) and each likes to play a different sport (tennis, golf, hockey or soccer).

The following clues are provided —

Jesse likes hockey.
Jack likes drama but dislikes golf.
One person likes both history and soccer, and it's not Joni.

I. Place ticks and crosses in cells of the grid below to appropriately record all the information given in, and able to be deduced from, these clues.

<table>
<thead>
<tr>
<th></th>
<th>history</th>
<th>maths</th>
<th>drama</th>
<th>science</th>
<th>tennis</th>
<th>golf</th>
<th>hockey</th>
<th>soccer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jesse</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>✔</td>
<td>✔</td>
<td>X</td>
<td>✔</td>
</tr>
<tr>
<td>Jae</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Jack</td>
<td>X</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Joni</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Use pencil.
Each section of the grid should be used.
Not enough clues are provided for all cells to be filled.

II. Give as much information as possible about which sport(s) and subject(s) Joni likes.

Joni likes to play golf and likes to study either maths or science.
Item 6, a moderately challenging three-star item, required students to complete a new puzzle involving a different group of four people (Jesse, Jae, Jack, Joni). Each person liked a different subject (history, maths, drama, science) and each liked to play a different sport (tennis, golf, hockey, soccer). Given a number of clues, students were asked to place ticks and crosses in a supplied grid and hence to deduce the sport(s) and subject(s) that Joni liked.

The item tested achievement in CCE 32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true and CCE 7 Translating from one form to another.

To be awarded an A-grade, students needed to correctly place all the required ticks and crosses in the grid and to identify that Joni liked to play golf as a sport, and that she liked maths or science (deliberately not enough information had been given to determine which one subject she liked). No incorrect information could be provided.

A significant proportion of students failed to use each section of the grid (as demanded in the cue) but did manage to correctly fill in the top two sections. Provided they were also able to identify that Joni liked to play golf as a sport, and that she liked maths or science, they were awarded a B-grade. Students who could correctly fill out the three sections of the grid but were unable to deduce the correct subjects and sport were also awarded a B-grade.

Students who could correctly fill out the top two sections of the grid but were unable to deduce the correct subjects and sport were awarded a C-grade. Some students could not deduce but were able to show the given information in cells in the top two sections of the grid (i.e. all cells shown as blue and yellow when the marking overlay was used) and from this were able to identify that Joni likes maths or science and golf or maths or science and golf or tennis. These responses were also awarded a C-grade.

Students who were able to show only the given information in the top two sections of the grid were given a D-grade. Students who were able to, without a correctly filled grid, identify that Joni liked maths or science and golf or maths or science and golf or tennis were also given a D-grade.

Responses that had all the cells shown as blue when the marking overlay was applied but that did not gain credit for Part II, were awarded an E grade. Students who had recorded information correctly in the cells outlined in red (as on the overlay), could also achieve an E-grade. Finally, responses for which no credit could be given for Part I but that contained at least one of maths, science, golf or tennis in Part II, were awarded the E-grade.

Students who used alternative markings for the blank spaces e.g. circles, question marks, dots were not credited as having correctly entered information in those cells of the grid.
UNIT THREE ITEM 6

PERFORMANCE DOMAIN

32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true
7 Translating from one form to another

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>For part I, all required information is appropriately recorded in the three sections of the grid. No ticks or crosses are incorrectly placed in the grid. <strong>AND</strong> For part II, the response provides maths, science, golf. No incorrect information is provided.</td>
</tr>
<tr>
<td>B</td>
<td>For part I, all required information is appropriately recorded in the two top sections of the grid. No ticks or crosses are incorrectly placed in the two top sections of the grid. <strong>OR</strong> For part I, all required information is appropriately recorded in the three sections of the grid. No ticks or crosses are incorrectly placed in the grid. <strong>AND</strong> For part II, the response provides maths, science and either just golf or golf, tennis. No other incorrect information is provided.</td>
</tr>
<tr>
<td>C</td>
<td>For part I, all required information is appropriately recorded in the two top sections of the grid. No ticks or crosses are incorrectly placed in the two top sections of the grid. <strong>OR</strong> For part I, all required information is appropriately recorded in the blue and the yellow cells (including those outlined in red). <strong>OR</strong> For part II, the response provides maths, science and either just golf or golf, tennis. No other incorrect information is provided. <strong>AND</strong> For part II, the response provides maths, science and either just golf or golf, tennis. No incorrect information is provided.</td>
</tr>
<tr>
<td>D</td>
<td>For part I, required information is appropriately recorded in the blue and the yellow cells (including those outlined in red). <strong>OR</strong> For part II, the response provides maths, science and either just golf or golf, tennis. No other incorrect information is provided. <strong>OR</strong> For part II, the response provides maths, science and either just golf or golf, tennis. No incorrect information is provided.</td>
</tr>
<tr>
<td>E</td>
<td>For part I, required information is appropriately recorded in the blue cells (including those outlined in red). <strong>OR</strong> For part II, the response provides at least one of either maths, science, golf or tennis. No other incorrect information is provided. <strong>OR</strong> For part II, the response provides at least one of either maths, science, golf or tennis. No incorrect information is provided.</td>
</tr>
<tr>
<td>N</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
</tr>
<tr>
<td>O</td>
<td>No response has been made at any time.</td>
</tr>
</tbody>
</table>

Note:
For part II, any extra information provided must be correct. Correct information about what Joni likes and dislikes is given below but to receive credit the response must state what Joni likes.

- **LIKES**
  - maths
  - science
  - golf
  (tennis depending on grade requirement)

- **DISLIKES**
  - history
  - drama
  - hockey
  - soccer
  (tennis depending on grade requirement)

Model Response:
I. Joni likes to play golf and likes to study either maths or science.

<table>
<thead>
<tr>
<th></th>
<th>history</th>
<th>maths</th>
<th>drama</th>
<th>science</th>
<th>tennis</th>
<th>golf</th>
<th>hockey</th>
<th>soccer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jesse</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>/</td>
<td>×</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>Jae</td>
<td>/</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>Jack</td>
<td>/</td>
<td>/</td>
<td>×</td>
<td>×</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Joni</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

II. Joni likes to play golf and likes to study either maths or science.

Marking Unit 2 6 of 6
Unit Four

The single item in this unit was based on two quotations that expressed feelings about being away from home. Students were asked to choose one quotation and respond to it by composing an entry for a travel journal. Responses indicated that almost all students were capable of attempting this item. There were very few omits.

The following table shows the percentage of students who achieved the various grades for the item in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 7</td>
<td>14.9</td>
<td>30.2</td>
<td>34.7</td>
<td>12.8</td>
<td>6.7</td>
<td>0.7</td>
<td>-</td>
</tr>
</tbody>
</table>

**Item 7**

**Model response A**

Choose one of the quotations, assume the attitude of the writer and compose a personal reflection which explores your emotions while away from home for an entry in your journal.

Choose one of the quotations, assume the attitude of the writer and compose a personal reflection which explores your emotions while away from home for an entry in your journal.

Dear Diary,

Today I arrived at my host family’s house in Italy after travelling for two months. The moment I arrived, my host mother told me we had a six o’clock wake up for the next two weeks, then handed me the daily itinerary. I am so disheartened. I loved the way experiences while travelling were so unexpected and surprising. I just want to be alone, independent. I feel robbed of my liberty and want to be on the road again. What should I do?
This evening, the cab dropped me off at a quaint cottage in Yorkshire. From seeing its pleasantly vintage and individual exterior, I relished the opportunity of stepping through the panelled wooden door into a world of pine furniture, fireplaces and battered books. To my horror, the living room greeted me with black vinyl couches and a plasma TV, and the sight of climate control units in every room filled me with dread. My discomfort was increased upon entering a sterile stainless steel kitchen. Would I ever escape the coldness of the modern apartment living? I might as well be back home.
Item 7 is a three-star item whose response area was in the form of a page from a journal. Students were required to choose one of the given quotations, assume the attitude of the writer and compose a personal reflection which would explore their emotions while away from home. One cue asked students to identify the choice of quotation in the box provided and the second cue asked students to ensure the entry represented the feelings expressed in the nominated quotation. This item tested achievement in CCE 28 Empathising and CCE 31 Interrelating ideas/themes/issues. In responding to the quotations it was important to consider the attitude of each of the writers towards being away from home.

In the case of quotation A, “I travel a lot; I hate having my life disrupted by routine” several interpretations could be seen to reflect the sentiment. These included:

- I travel a lot because I want my life to be an adventure, to have excitement and be stimulating. I hate having to endure the pedestrian routines that get in the way of my really exciting life.
- I travel frequently and I hate all the routines that go with travel.
- I travel a lot and I hate having the spontaneity of travel disrupted by any sort of routine.
- I have a routine of travel. This disrupts my (family) life.

In the case of quotation B, “I dislike feeling at home when I’m abroad”, two interpretations that reflected the sentiment were:

- While I am away from home I dislike it when I am reminded of home.
- I dislike feeling 'at home' or feeling comfortable or at ease while travelling.

It is important to remember that these are not the only acceptable interpretations of each of these quotations but were the most common ones used by students. The meaning of abroad was generously interpreted as any place away from home, either overseas or in Australia. It need not be a specific country or city; in some responses it was signaled by a reference to a hotel room or simply by the word ‘away’.

To be awarded the highest grades students had to ensure that the response was a personal reflection and that within it they demonstrated an understanding of how the author of the nominated quotation felt about being away from home. This could be done by exploring the emotion/feeling the writer is likely to have while away from home and providing an away-from-home context for the entry. Identifying the quotation nominated by writing its letter in the box provided was expected for an A-grade response but a B-grade response allowed for the quotation to be inferred by the reader.

Students did not appear to have difficulty with this response. Almost all responses were in the form of a personal reflection. Students could also unpack the author’s meaning(s) and were able to adopt the correct attitude. The most common error was misinterpreting quotation B as being about homesickness. Weaker responses tended not to explore the emotion or feeling of the writer. Rather, they merely expressed an emotion or feeling.

A shortcoming of many responses was not providing an away-from-home context for the journal entry. Too many responses were written about being away from home rather than while being away from home. Careful reading of the stem indicates this difference. These responses were referred to as ‘armchair’ responses because the remarks could be made while sitting comfortably at home, chatting to someone about your ideas on travel.
### UNIT FOUR ITEM 7

#### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
</tr>
<tr>
<td>O</td>
<td>No response has been made at any time.</td>
</tr>
<tr>
<td>C</td>
<td>The response demonstrates a clear understanding of how the author of one of the quotations feels about being away from home.</td>
</tr>
<tr>
<td>A</td>
<td>The response • is a personal reflection • assumes an attitude that demonstrates a clear understanding of how the author of the nominated quotation feels about being away from home • explores an emotion/feeling the author of the quotation is likely to have while away from home • provides an away-from-home context for the personal reflection. The quotation on which the response is based is identified or can be inferred.</td>
</tr>
<tr>
<td>B</td>
<td>The response • is a personal reflection • assumes an attitude that demonstrates an understanding of how the author of one of the quotations feels about being away from home • expresses an emotion/feeling the author of the quotation is likely to have while away from home • provides an away-from-home context for the personal reflection. The quotation on which the response is based is identified or can be inferred.</td>
</tr>
<tr>
<td>D</td>
<td>The response recounts an experience or emotion associated with being away from home, and demonstrates some understanding of one of the quotations.</td>
</tr>
</tbody>
</table>

#### Note:

Paraphrased or copied stimulus material gains no credit.

#### Model Response:

1. **A**  
   
   **Dear Diary,** Today I arrived at my host family’s house in Italy after travelling for two months. The moment I arrived, my host mother told me we had a six o’clock wake up for the next two weeks, then handed me the daily itinerary. I am so disheartened. I loved the way experiences while travelling were so unexpected and surprising, just to be in a new place, but now I feel trapped. I miss the freedom I felt while travelling. I feel I’ve been robbed of my liberty and want to be on the road again. What should I do?

2. **B**  
   
   This evening, taxi dropped me off at a quaint cottage in Yorkshire. From seeing its pleasantly vintage and individual exterior, I relished the opportunity to step though the panelled wooden door into a world of pine furniture, fireplaces and battered books. To my horror, the living room greeted me with black vinyl couches and plasma TV’s, and the sight of climate control units in every room filled me with dread. My discomfort was increased upon entering a sterile stainless steel kitchen. Would I ever escape the coldness of the modern apartment living? I naught as well be back home.
Unit Five

The three items in this unit were based on data given in diagrams, tables and text relating to two periodic comets — Comet Tempel-Tuttle and Halley's Comet. Additional information about other celestial objects was given for use in the third item.

The following table shows for each item the percentage of students who achieved the various grades for the items in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 8</td>
<td>66.8</td>
<td>7.5</td>
<td>13</td>
<td></td>
<td></td>
<td>9.4</td>
<td>3.3</td>
</tr>
<tr>
<td>Item 9</td>
<td>38.2</td>
<td>3.9</td>
<td>11.1</td>
<td>9.6</td>
<td></td>
<td>33.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Item 10</td>
<td>45.7</td>
<td>8.1</td>
<td>4.4</td>
<td>4.7</td>
<td>15.6</td>
<td>14.6</td>
<td>6.8</td>
</tr>
</tbody>
</table>

**Item 8**

**Model response**

On 2 September 2009, compared with Halley’s Comet, how many kilometres closer to Earth should Comet Tempel-Tuttle be?

Show all steps.

\[
\text{Difference in AU} = 32.762 - 18.512 \\
\quad = 14.25 \text{ AU} \\
\text{Difference in km} = 14.25 \times 149,600,000 \\
\quad = 2,131,800,000 \text{ km}
\]

**or**

Show all steps.

\[
\text{Halley in km} = 32.762 \times 149,600,000 \\
\quad = 4,901,195,200 \\
\text{Tempel-Tuttle in km} = 18.512 \times 149,600,000 \\
\quad = 2,769,395,200 \\
\text{Difference in km} = 4,901,195,200 - 2,769,395,200 \\
\quad = 2,131,800,000
\]
Commentary

Item 8, a straightforward two-star item, required students to calculate how much closer Comet Tempel-Tuttle was to Earth than Halley’s Comet was on 2 September 2009. The distance each comet was from Earth in astronomical units (AUs) was given in the diagram and information about the number of kilometres in an AU was provided. The calculations required could be done by a single subtraction in AUs followed by a unit conversion to kilometres or two unit conversions followed by a subtraction in kilometres. The cue asked students to “show all steps” which indicates that students should write the calculator steps using mathematical symbols in their response and not do several steps on the calculator and then simply transcribe the single result. The type of calculations done on the calculator should be shown in the response.

This item tested achievement in CCE 16 Calculating with or without calculators. There were three creditable grades awarded for this item. Approximately 87% of students were able to achieve a creditable grade in this item.

To achieve an A-grade, students needed to provide an answer of 2 131 800 000 or its equivalent such as 2.1318 x 10^9. The most efficient method of calculating this value was to obtain a difference of 14.25 AUs as the first step followed by multiplying by 149 600 000 as the unit conversion step. It was acceptable that some students completed both steps as a single mathematical operation such as (32.762 - 18.512) x 149 600 000. Students who did this successfully gained full credit if they showed the written form of the operation in full.

Responses giving a difference that was based upon one error that could be identified (errors can only be identified if the full working used is shown which shows the importance of recording the steps taken) were awarded a B-grade. Many of the B-grade responses attempted the unit conversions first but students appeared unable to manipulate the large numbers even with a calculator which resulted in an error. A similar number of students completed both unit conversions successfully but were also unable to transcribe or manipulate the large numbers on their calculator and an error resulted in the subtraction.

The majority of students who were awarded a C-grade provided one correct unit conversion but made more than one error in attempting to arrive at a difference. While most students attempted unit conversions some could only determine a difference. A smaller number of C-grade responses correctly determined the difference in astronomical units but either did not attempt a unit conversion or made several errors in their attempts.

Unfortunately a number of students attempted to use scaling to find the distances in Figure 1 but as the diagram was not labelled as being to scale this was not useful. This method of arriving at the distances was flawed and unnecessary considering Earth distance was given under the name of each comet in the diagram. This type of response was given an N-grade. Students should gather required information carefully and not assume diagrams given are to scale.
UNIT FIVE ITEM 8

PERFORMANCE DOMAIN

16 Calculating with or without calculators

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The response gives the difference in kilometres as 2131800000 or acceptable equivalent. All steps are shown. No incorrect working is shown, to arrive at the difference in kilometres.</td>
<td>The response gives a difference in kilometres that would have been correct except for at most one error. OR The response gives 2131800000 or acceptable equivalent.</td>
<td>There is evidence that at least one step has been performed correctly.</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td>No response has been made at any time.</td>
</tr>
</tbody>
</table>

Notes

1. Acceptable equivalents to 2131800000 are
   - 2.1318 \times 10^9
   - 2.132 \times 10^9
   - the correct number expressed using any power of 10
2. Steps include subtraction (Halley distance in AU/km minus Tempel-Tuttle distance in AU/km) and unit conversion (x 149600000).
3. Enough steps need to be shown to enable identification of an error. Errors could include transcription error, calculation error, inappropriate rounding, the final result out by a power of 10, ...
4. There is no penalty for incorrect or omitted units of measurement.

Model Responses:

1. Difference in AU = 32.762 − 18.512 = 14.25 AU
   Difference in km = 14.25 \times 149600000 = 2131800000 km

2. Halley in km = 32.762 \times 149600000 = 4901195200
   Tempel-Tuttle in km = 18.512 \times 149600000 = 2769395200
   Difference in km = 4901195200 − 2769395200 = 2131800000

Marking Unit 1 3 of 5
**Item 9**

*Model response*

Figure 2 shows the orbit of Earth around the Sun and part of the orbit of Comet Tempel-Tuttle during the year 2031. The positions of the comet and Earth when they will next be closest to one another are shown by the coloured dots. Arrows indicate the direction of travel of Earth and Comet Tempel-Tuttle. The time scale on the comet’s orbit is in fortnightly intervals.

![Figure 2](image)

Comet Tempel-Tuttle and Earth will next be closest to one another on 23 August 2031.

Mark a single cross (X) on the time scale in Figure 2 to indicate the approximate position of the comet on 21 June 2031.

This portion of the 2031 calendar may be useful.
Item 9, a two-star item, required students to mark a single cross on the time scale given in Figure 2 to indicate the approximate position of Comet Tempel-Tuttle on 21 June 2031. Students were told that the coloured dots showed the positions of Earth and the comet on 23 August 2031 and that the arrows on their orbits indicated the direction of travel of Earth and the comet.

This item tested achievement in CCE 6 Interpreting the meaning of diagrams, CCE 7 Translating from one form to another and CCE 32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true.

Students were given the information that the intervals shown on the time scale on the comet’s orbit were measured in fortnights. They were also given the June, July, August months of the 2031 calendar. A cue informed students that the use of this portion of the 2031 calendar may be useful in formulating a response.

To obtain an A-grade the students had to determine, with or without the aid of the calendar given, that there were 9 weeks or 4.5 fortnights between the dates given. This had to be indicated on the time scale (the comet’s orbit), by marking a cross midway between the 4th and 5th strokes. Just over 38% of students were awarded an A-grade.

For the B-grade some degree of inaccuracy was allowed so that students were able to place a single mark, not specifically a cross, on the orbit somewhere between (rather than midway between) the 4th and 5th strokes. It was surprising how many students disobeyed the direction to use a single cross. Multiple marks or multiple crosses resulted in an ambiguous response which was given an N-grade.

A C-grade was awarded to those responses that either placed the mark on or between the 4th and 5th strokes or counted the 4th and 5th strokes in a clockwise direction i.e. went forward rather than backward in time and placed the mark midway. The majority of the C-grades were associated with the first category while a small number of students counted in the incorrect direction.

A D-grade was awarded to responses where the weeks on the calendar or the fortnights on the time-scale were miscounted because the student had counted inclusively and so the mark was placed between the third and fourth strokes or between the fifth and sixth strokes. Misunderstanding the strokes as intervals of one week which resulted in the mark being placed on the ninth stroke also received a D-grade as did a response where the counting was in the opposite direction and the placement of the mark was not accurate enough for the C-grade.
# Marking Scheme

## UNIT FIVE ITEM 9

**PERFORMANCE DOMAIN**

<table>
<thead>
<tr>
<th></th>
<th>6 Interpreting the meaning of diagrams ...</th>
<th>7 Translating from one form to another</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The response shows a single cross placed on the comet's orbit midway between the fourth and fifth strokes.</td>
<td>The response shows a single mark placed on the comet's orbit between the fourth and fifth strokes or on either the fourth or the fifth stroke.</td>
</tr>
<tr>
<td>B</td>
<td>The response shows a single mark placed on the comet's orbit between the fourth and fifth strokes.</td>
<td>The response shows a single mark placed on the comet's orbit midway between the fourth and fifth strokes, in the opposite direction.</td>
</tr>
<tr>
<td>C</td>
<td>The response shows a single mark placed on the comet's orbit between the fourth and fifth strokes or on either the fourth or the fifth stroke.</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>The response shows a single mark placed on the comet's orbit between the third and the fourth strokes.</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>No response has been made at any time.</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

1. Count anticlockwise from the pink dot except where “in the opposite direction” is stipulated.
2. A response which provides multiple crosses or multiple marks on the diagram will be given an N-grade.

**Model Response:**

![Diagram](image-url)

**Marking Unit 1 4 of 5**
Item 10

Model response

During its 1986 apparition, Halley’s Comet had an apparent magnitude of about 2.5.

During that apparition, how much brighter was Halley’s Comet than the ‘faintest stars observable with the naked eye under perfect conditions’?

\[
\text{Difference} = 6.5 - 2.5
\]
\[
= 4
\]

\[
\text{Variation} = 2.512^4
\]
\[
= 40
\]

Commentary

The final item in this unit, Item 10, was a three-star item which required students to apply a progression of steps which were supplied in the stimulus material to calculate the relative brightness of Halley’s Comet during its 1986 apparition. This item tested achievement in CCE 37 Applying a progression of steps and CCE 16 Calculating with or without calculators.

The stimulus material provided students with a list of apparent magnitudes of a selection of celestial objects as well as an algorithm to determine the factor by which Halley’s Comet was brighter than the faintest star visible to the naked eye. The algorithm, as articulated in the information given below the table, involved subtracting the apparent magnitude of the brighter object (the smaller number) from the apparent magnitude of the fainter object (the larger number). The difference obtained from this subtraction was then used to form a power to be used as the index of the base 2.512. To assist students in understanding this algorithm, the solution to a similar problem using parallel data relating to the Sun and Moon was provided in the stimulus material. Where a completed example is given it is useful for students to check their method by redoing the example and comparing results.

Almost 46% of students were able to provide responses which were awarded the A-grade. These students showed in their response the correct steps necessary to solve the problem, had access to an appropriate calculator and were proficient and accurate in its use.

The B-grade captured responses that either provided the correct result but did not show all steps as required in the first cue or did not provide the result rounded to the nearest whole number as required by the second cue. Once again students are reminded to read the stem and the cue(s) carefully.

Mechanical errors were reasonably common and generally fell into the categories of transcription errors (such as 6.2 instead of 6.5), table selection errors (usually choosing 3 instead of 6.5) or simple mistakes in calculations. If the answer obtained was consequentially correct after the error, a response containing a single mechanical error was credited with a C-grade. Regrettably it appeared that a small number of students did not have a calculator or perhaps were unable to use the calculator they had to evaluate the final calculation of 2.512 to the power of 4. If these students were able to perform all steps up to this final calculation they were able to achieve a C-grade in this item as they had shown some mastery of the algorithm.

Responses which contained two or more mechanical errors were relatively rare and these responses were awarded the D-grade. Other responses which could be credited with this grade were those which contained a
single algorithmic error. The most common algorithmic error occurred in the first step where the student made the error of using the larger number as the apparent magnitude of the brighter object and the smaller number as the apparent magnitude of the fainter object. This was clearly at odds with the statement given above the table, “the brighter the object appears, the smaller is its apparent magnitude”, the data given in the table were listed from brightest celestial object to least bright and the example given which clearly showed the Sun with the smaller apparent magnitude (-26.7) as 436 800 times brighter than the full moon with the larger apparent magnitude (-12.6). Two other examples of misuse of the given algorithm included reversing the power expression (i.e. using 2.512 as the index and 4 as the base) and finding the product (i.e. 2.512 x 4) instead of the power i.e. 2.512^4.

Some students were able to engage with the data provided in the stimulus material in only a very minimal way and in most cases, were only able to locate and subtract the two appropriate apparent magnitudes (i.e. 6.5 - 2.5 = 4). This was the most frequent type of response which earned the E-grade.
**MARKING SCHEME**

<table>
<thead>
<tr>
<th>UNIT FIVE</th>
<th>ITEM 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMANCE DOMAIN</td>
<td>37 Applying a progression of steps to achieve the required answer</td>
</tr>
<tr>
<td></td>
<td>16 Calculating with or without calculators</td>
</tr>
</tbody>
</table>

### A

The response provides 40 and shows that it results from:
- $m_f$ of 6.5 and $m_b$ of 2.5
- correct use of the given algorithm.
No incorrect working is used.

### B

The response provides an answer between 39 and 40 inclusive and shows that it results from:
- $m_f$ of 6.5 and $m_b$ of 2.5
- correct use of the given algorithm.
No incorrect working is used.

### C

The response provides an answer and shows that it results from:
- $m_f$ of 6.5 and $m_b$ of 2.5
- correct use of the given algorithm.
No incorrect working is used.

### D

The response provides an answer and shows that it results from applying the given algorithm:
- includes at most one mechanical error
- is consequentially correct.

### E

The response indicates that the difference is 4 and includes no incorrect working to that point.

### N

Response is unintelligible or does not satisfy the requirements for any other grade.

### O

No response has been made at any time.

---

**Notes:**

1. The given algorithm involves:
   - “subtracting the apparent magnitude of the brighter object from that of the fainter object” [“the brighter the object appears, the smaller is its apparent magnitude” hence the subtraction must show the larger number minus the smaller number]
   - “then using this difference as the power of the number 2.512”.

2. Appropriate rounding is only a requirement at the A-grade.

3. Mechanical errors could include such errors as transcription errors, calculation errors, selection errors, …

**Model Response:**

\[
\text{Difference} = 6.5 - 2.5 \\
= 4 \\
\text{Variation} = 2.512^4 \\
= 40
\]

---

**Marking Unit 1 5 of 5**
Unit Six

The single item in this unit is based on a black and white illustration which was provided to the students. Students were told in the introduction to the item that the illustration was developed to accompany a feature article about violence begetting violence.

The following table shows the percentage of students who achieved the various grades for the item in this unit.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 11</td>
<td>1.3</td>
<td>13.8</td>
<td>44.6</td>
<td>29.5</td>
<td>8.6</td>
<td>1.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

**Item 11**

*Model response*

The illustration on the opposite page was developed to accompany a feature article about violence begetting violence. Discuss how the artist has used analogy effectively in this illustration.

In the illustration, the artist has used various graphic methods to convey the idea that violence begets violence. Through the many differences between the two fights, the artist creates the idea that violence can transcend setting and class when others are exposed to it. The fights depicted are set in different places.

The fight in the film seems to be in a leafy jungle, whereas the other fight is set in a movie theatre, which carries connotations for the audience of a social gathering. The two men attacking are clothed and depicted differently. The man in the film is attired to show that he is 'rough', while the other man is wearing a conventional suit. The two men are shown to be similar through their punches and spiked hair style. All of these factors assist the artist in portraying that by exposing people to violence they will become violent. These aspects serve as an effective analogy to convey that violence begets violence.
Item 11 is a four-star item, indicating that it is a challenging item. Students were asked to discuss how the artist used analogy effectively. It was explained in the introduction that graphic artists sometimes use analogy to develop their illustrations. Analogy was defined as a method of comparing things that, in part, relate to one another. The cue asked students to take into account details of such components as the figures and the settings.

This item tested achievement in CCEs 29 Comparing, contrasting, 45 Judging, 31 Interrelating ideas/ themes/issues.

Thoughtful consideration of the illustration shows that the settings can be contrasted as:
- spiky foliage of the jungle and neat rows of the cinema theatre seating
- make believe of the movie and reality of the cinema
- exterior setting for the movie and the interior of the cinema
- light in colour (movie) and dark in colour (cinema).

The figures can be compared as:
- the faces of the aggressors are both essentially expressionless
- the action (punch) portrayed is similar for both pairs
- the hairstyles of both aggressors and both victims are portrayed as similar
- the 'kapow' bubbles indicate the impact of the punches is similar
- the stance/body position of each figure is essentially similar
- the clothing of the aggressors is different in significant ways
- the accessories worn by the aggressors are different
- the hairstyles of the aggressor and the victim of each couple are significantly different.

Responses that were awarded an A-grade provided detailed examples referring to specific features from the illustration showing differences in the settings and the figures and showing a similarity in the figures. They also showed how the examples contributed to the effectiveness of the illustration judged in terms of how well it serves the purpose of accompanying the article on violence begetting violence.

Students did seem to find this item quite challenging as many did not respond to the stem which asked them to “discuss how the artist has used analogy effectively”. Some students merely repeated the information given in the stem and cue or argued the appropriateness of the illustration for this article. This is not what they were directed to do. Many responses offered examples of similarities and ignored examples of difference in the illustration. Students should ensure that they understand that comparing considers similarities and differences. See appendix 1 CCE 29. Additionally, too many responses only articulated examples and did not then relate them to the effectiveness of the illustration.
## UNIT SIX ITEM 11

### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th>Marking Unit 4 2 of 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>The response details</td>
<td>The response details TWO examples from one or more of</td>
<td>The response identifies TWO examples from one or more of</td>
<td>The response identifies ONE of</td>
<td>The response interrelates one or more aspects of the illustration with the topic of violence begetting violence.</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td>No response has been made at any time.</td>
</tr>
<tr>
<td>• a difference in the settings</td>
<td>• differences in the settings</td>
<td>• differences in the settings</td>
<td>• a difference in the settings</td>
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<tr>
<td>• a difference in the figures</td>
<td>• differences in the figures</td>
<td>• differences in the figures</td>
<td>• a difference in the figures</td>
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<tr>
<td>• a similarity in the figures</td>
<td>• similarities in the figures</td>
<td>• similarities in the figures</td>
<td>• a similarity in the figures</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>AND shows how these contribute to the effectiveness of the illustration.</td>
<td>AND shows how these contribute to the effectiveness of the illustration.</td>
<td>AND shows how these contribute to the effectiveness of the illustration.</td>
<td>AND makes reference to the effectiveness of the illustration.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

1. The effectiveness of the illustration is judged in terms of how well it serves the purpose of accompanying the article on violence begetting violence.
2. The two examples required for the B- and C- grades may be two differences in the figures or settings, two similarities in the figures, or a difference in settings or figures together with a similarity in the figures.

### Model Response:

In the illustration, the artist has used various graphic methods to convey the idea that violence begets violence. Through the many differences between the two fights, the artist creates the idea that violence can transcend setting and class when others are exposed to it. The fights depicted are set in different places. The fight in the film seems to be in a leafy jungle, whereas the other fight is set in a movie theatre, which carries connotations for the audience of a social gathering. The two men attacking are clothed and depicted differently. The man in the film is attired to show that he is ‘rough’, while the other man is wearing a conventional suit. The two men are shown to be similar through their punches and spiked hair style. All of these factors assist the artist in portraying that by exposing people to violence they will become violent. These aspects serve as an effective analogy to convey that violence begets violence.
Unit Seven

This unit was based on information from a government website which covered the award of Australian Fire Service (AFS) Medals. From this it was found that the maximum number of medals a fire service may award in a particular year depends on the number of full-time members and other members (part-time, volunteer or auxiliary) the service had on June 30 of the previous year. The items posed questions about the relationships between these memberships and the maximum number of medals available to the services.

The following table shows for each item the percentage of students who achieved the various grades for these items.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
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</thead>
<tbody>
<tr>
<td>Item 12</td>
<td>42.2</td>
<td>15.9</td>
<td>21.3</td>
<td></td>
<td></td>
<td>19.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Item 13</td>
<td>16.7</td>
<td>10.9</td>
<td>19.5</td>
<td>33.5</td>
<td></td>
<td>15.1</td>
<td>4.3</td>
</tr>
<tr>
<td>Item 14</td>
<td>6.4</td>
<td>2.9</td>
<td>1.6</td>
<td>10.8</td>
<td>39.7</td>
<td>27.4</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Item 12

Model response

For that state, what is the maximum number of AFS Medals that can be awarded, under the current regulations?

Write your answer here. ... AFS Medals

Commentary

Item 12, a three-star item, required students to find the maximum number of Australian Fire Service (AFS) Medals that a state fire service could award and gave the information that the number of full time permanent members was 4695 and the number of other members was 10 143 at the cut-off date. This item tested achievement in CCE 2 Finding material in an indexed collection and CCE 16 Calculating with or without calculators.

Students needed to read the regulations given in the stimulus carefully and apply the concept of receiving an award for every 1000 or part of 1000 and every 5000 or part of 5000. To determine how many AFS Medals the number of full-time members entitled the service to award, students had to divide 4695 by 1000 and round the result up to 5 as a medal may be given for every 1000 full-time, permanent members or every part of 5000. This process was repeated with the 10 143 other members and their divisor, 5000, to yield an answer of 3 medals. The additional award was then added on for an answer of 9 medals.

An A-grade was the most frequently awarded grade. There were several ways in which students made a single error which gave an incorrect tally of the number of medals. Most commonly, students did not remember to add the additional award and gave 8 as their response. Others rounded the decimal answers in the conventional manner which meant the “part of” was not accounted for and this gave 5 medals for the full-time contingent (which happened to be the same as the correct method) but 2 for the others which was incorrect. Adding the extra medal yielded an answer of 8. For such responses, a B-grade was awarded.

Some students used the same divisor for both membership categories but used the “part of” correctly. This was counted as a single error so it was possible to gain a B-grade (the second lowest creditable grade for this
item) with the answers of $5+11+1 = 17$ or $1+3+1 = 5$ providing some comprehensible working was shown to support the result.

Those responses that gave 8 but showed no intelligible working were awarded a C-grade. The wisdom of showing some working is borne out here. Any student who was able to determine the number of AFS Medals for either membership category was given a C-grade. Those students who truncated 4.695 and 2.0286 to 4 and 2 respectively but added the extra medal to arrive at an answer of 7 were also given a C-grade.
## UNIT SEVEN  ITEM 12

<table>
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<tr>
<th>PERFORMANCE DOMAIN</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2 Finding material in an indexed collection</td>
<td>16 Calculating with or without calculators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>The response provides 9 as the number of AFS Medals able to be awarded.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>The response shows working that includes at most one error and supplies a whole number of medals for each membership type and the consequentially correct number of AFS Medals.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>The response shows working that includes the correct number of medals able to be awarded for at least one section of the membership.</td>
<td>The response provides 8 as the number of AFS Medals able to be awarded.</td>
<td>The response provides 7 as the number of AFS Medals able to be awarded and shows working that demonstrates it comes from four full-time medals, two other member medals and one additional medal.</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td></td>
<td></td>
<td>No response has been made at any time.</td>
</tr>
<tr>
<td>O</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Model Response:**

9... AFS Medals
Item 13

Model response

One year, a state fire service awarded, under the regulations, a total of 10 AFS Medals. As at 30 June in the preceding year, that fire service had 2817 full-time permanent members.

Determine the minimum number of part-time, volunteer or auxiliary members in that state’s fire service as at 30 June in the preceding year. Explain your reasoning.

Number of other member medals = 10 – 1 (additional medal) – 3 (full-time) …

= 6

The maximum number of other members for five medals is 5 x 5000 = 25 000

1 is the smallest part of 5000 therefore the minimum number of other members for 6 medals is 25 000 + 1 = 25 001

Commentary

In this two-star item students were given some additional information about the number of medals awarded in one year. They were told the number of full-time members in that year. They were then required to determine the minimum number of other members who were in the service at that time and explain their reasoning.

This item tested achievement in CCE 32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true, CCE 26 Explaining to others and CCE 43 Analysing.

The process for finding the solution to this problem was fairly clear. The number of full-time medals needed to be calculated and along with the one additional medal subtracted from the 10 medals stated in the stem. Once the number of medals available for the other members was known the minimum number of other members could be calculated.

Students were asked to explain their reasoning. This meant that most responses contained a mixture of mathematical calculations and verbal explanations to support their working. Many B-grades were awarded because, although the quality of the explanation for the 6 other member medals was clear, the reasoning behind the minimum number of other members being 25 001 was not explained fully and clearly.

Achieving the solution required a process which could be shown or explained by multiplying one fewer than the number of other-member medals by 5000 and then adding just one more member to comply with the "part of" with the smallest number. Many students showed/explained only one part of the process.

The stimulus material contained information about the number of medals "per 1000 or part of 1000" and "per 5000 or part of 5000". Not using the "part of" information was a common error and led to many responses that provided a number of other members that was consistent with the number of medals but was not the minimum number of other members. The most common of these was 30 000 other members being consistent with 6 medals, and then other particular values from 25 000 up to 30 000, such as 27 500. These responses were awarded a C-grade. Answers such as 35 000 other members (consistent with 7 medals) and 40 000 (consistent with 8 medals) were common and were awarded a D-grade. In the cases just described, the number of other members given is in fact the maximum number not the minimum.

Many students showed that they did not grasp the fact that 1 more member above the previous maximum number was sufficient to award one more medal (1 being the smallest part of 5000), however if this was the only fact that a student recognised, e.g. they answered 6001 or 42 001, they were given a D-grade, as these responses showed that this important concept in the item was understood. Responses that showed a correct calculation of 6 medals awarded to other members were also awarded a D-grade.
**UNIT SEVEN  ITEM 13**

**PERFORMANCE DOMAIN**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Reaching a conclusion which is necessarily true provided a given set of assumptions is true</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Explaining to others</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Analysing</td>
<td></td>
</tr>
</tbody>
</table>

**MARKING SCHEME**

**A**
- The response provides 25001 as the minimum number of other members.
- The explanation shows that the number of medals for other members is found by subtracting the number of medals for full-time members and the additional medal from the total.
- The reasoning for the minimum number of other members is clear.

**B**
- The response provides 25001 as the minimum number of other members.
- The explanation shows that the number of medals for other members is found by subtracting the number of medals for full-time members and the additional medal from the total.
- The reasoning for the minimum number of other members is clear.

**C**
- The response provides 6 as the number of medals for other members.
- The number of other members is consistent with this number of medals.
- The explanation shows working that includes at most one error and supplies the consequentially correct minimum number of other members.

**D**
- The response shows that 6 medals were awarded for the other members.
- The number of other members is consistent with this number of medals.
- The explanation shows working that includes at most one error and supplies the consequentially correct minimum number of other members.

**N**
- Response is unintelligible or does not satisfy the requirements for any other grade.

**O**
- No response has been made at any time.

**Note:**
- The numbers of medals used in calculations must be whole numbers for the calculations to gain credit.

**Model Response:**

\[
\begin{align*}
\text{Number of other member medals} &= 10 - 1 \text{ (additional medal)} - 3 \text{ (full-time)} = 6. \\
\end{align*}
\]

The maximum number of other members for five medals is \(5 \times 5000 = 25000\).

1 is the smallest part of 5000 therefore the minimum number of other members for 6 medals is \(25000 + 1 = 25001\).
I. Construct a clear and effective diagram from which you can easily read off the maximum number of Australian Fire Service Medals that a state can award each year under the current regulations.

Your diagram should make use of the axes provided below and account for up to 4000 full-time members and up to 20000 other members.

II. Now demonstrate that your diagram works.

Provide an example of membership: 

\[ \begin{align*}
1500 & \text{ full-time members} \\
14000 & \text{ other members.}
\end{align*} \]

Place an \( \times \) on the diagram to indicate your example of membership.

From your diagram, read off the maximum number of Australian Fire Service Medals that could be awarded on the basis of this membership.

Write your reading here. 6 AFS Medals
Item 14, a challenging five-star item, had two parts. Part I required the student to construct a clear and effective diagram from which the maximum number of AFS Medals a state can award in a year can be easily read off, while Part II required the student to demonstrate how their diagram would work. The emphasis in this item is on the production of a diagram which is functional and easy to read.

This item tested achievement in CCE 46 Creating/composing/devising, CCE 20 Setting out/presenting/arranging/displaying, CCE 13 Recording/noting data and CCE 15 Graphing.

The response area for Part I provided a grid with the horizontal axis showing the numbers of full-time members from 0 to 4000 with intervals of 1000 and the vertical axis showing the numbers of other members from 0 to 20 000 with intervals of 2000. Part II required students to demonstrate that their diagram worked by providing an example of full and other membership numbers and plotting an X on their diagram to represent that example. They then had to read off the maximum number of medals this membership would qualify the state to award and to write this in the box provided at the bottom of the page.

For A- and B-grade responses, effective diagrams in Part I generally had boundaries marked at 5000, 10 000, 15 000 and 20 000 on the vertical axis and 1000, 2000, 3000 and 4000 on the horizontal axis and each of the 16 regions produced by these boundaries were numbered with the appropriate maximum number of medals. Many responses could have been awarded an A-grade except that the numbering of the regions showed that the one additional medal had not been factored in. Another typical B-grade response was where Part I had been done correctly but Part II was not correctly or fully completed.

There were various types of C-grade responses, but in general responses that were awarded a C-grade showed a system that was not easy to read but allowed the maximum number of medals for each membership type to be found and then instructed the user to add one for the additional medal to the sum of the medals from the two membership types. These systems included a single diagonal line, a straight line for each membership type, stepped lines for each membership type, regions along each axis and various arrangements of regions often colour coded. Part II was particularly useful for this type of response as it enabled the student to show how their system worked. Unfortunately some students did not choose numbers of members that demonstrated how their system dealt with the part of 1000 for full time members or the part of 5000 for the other members.

D-grades were awarded to responses which demonstrated that for the diagram to be easily read it needed numbered regions. Although some of the regions shown did not always provide the correct number of medals at least one region needed to be correct. A response that defined the 16 required regions but failed to number them or numbered them incorrectly (other than being out by the additional medal) could be given a D-grade. A third type of D-grade response was similar to the C-grade responses but failed to take into account the additional medal.

The majority of E-grades were awarded to responses that provided a suitable number of members for each membership type and plotted this membership appropriately on their diagram. Some E-grades were also given if the correct number of medals for one membership type could be obtained from the diagram provided.
## UNIT SEVEN ITEM 14

### PERFORMANCE DOMAIN

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

### MARKING SCHEME

**A**
- In Part I
  - The response provides a clear and effective diagram from which the correct maximum numbers of medals available can easily be read off.
  - **AND**
    - In Part II
      - Two suitable numbers are given as an example of membership.
      - An X is placed appropriately on the diagram.
      - The reading of the maximum number of AFS Medals is consistent with the diagram.

**B**
- In Part I
  - The response provides an effective diagram from which the correct maximum numbers of medals available can be read off.
  - **AND**
    - In Part II
      - Two suitable numbers are given as an example of membership.
      - An X is placed appropriately on the diagram.
      - The reading of the maximum number of AFS Medals is consistent with the diagram.

**C**
- In Part I
  - The response provides a diagram from which the maximum numbers of medals available can be determined by following given or implied instructions.
  - **AND**
    - In Part II
      - Two suitable numbers are given as an example of membership.
      - An X is placed appropriately on the diagram.
      - The reading of the maximum number of AFS Medals is consistent with the diagram.

**D**
- The response provides a diagram that shows regions or lines that allow maximum numbers of medals available to be read off.
  - **AND**
    - At least one region or line gives the correct maximum number of medals available.
    - An X is placed appropriately on the diagram.
    - The reading of the maximum number of AFS Medals is consistent with the diagram.

**E**
- Two numbers are given as an example of membership.
  - An X is placed appropriately on the diagram.
  - The response provides regions or lines that allow the number of medals for one membership type to be determined by following given or implied instructions.

**N**
- Response is unintelligible or does not satisfy the requirements for any other grade.

**O**
- No response has been made at any time.

### Notes:

1. If, in Part I, the numbering of the diagram is consistently one less than the correct value and the additional medal is not accounted for by instructions, grade the response as if they were the correct values, and if the resultant grade would have been A-, B- or C-grade, apply a penalty of one grade.
2. If Part II is incomplete, inconsistent with the diagram or blank, treat the response as follows: Grade the response on the basis of Part I only, and if the resultant grade would have been A-, B- or C-grade, apply a penalty of one grade.
3. Both Notes 1 and 2 may apply to a response, resulting in an overall penalty of two grades.

---

Marking Unit 7 3 of 4
UNIT SEVEN  ITEM 14

Model Response:

I.

II.

Maximum AFS Medals

<table>
<thead>
<tr>
<th>Number of other members (thousands)</th>
<th>Number of full-time members (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>6 7 8 9</td>
</tr>
<tr>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>4 5 6 7 8</td>
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<td>14</td>
<td></td>
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<td>12</td>
<td>3 4 5 6 7</td>
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<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Write your reading here: 6 AFS Medals

...1500... full-time members
...14000... other members.
Unit Eight

An extract from a satirical article written by Margaret Atwood, entitled *Encouraging the Young*, provided the stimulus material for this unit. On the surface Atwood seems to be urging young people to follow their dreams but through specific techniques of language, a tone of sarcasm belies the apparent encouragement, revealing sharp criticism of the efforts of the young. The introduction is significant in that it reveals the author’s age (mid 60s); hence her attitude towards the young was influenced by her experiences in the 40s and 50s when the young were seemingly more resilient and less indulged. Throughout this unit, many students identified with 'the young' and the comparison between themselves and Atwood (the old) informed their responses.

The following table shows for each item the percentage of students who achieved the various grades for these items.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
<th>O</th>
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<td>22.3</td>
<td>30.3</td>
<td>6.1</td>
<td>32.7</td>
<td>1.8</td>
</tr>
<tr>
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<td>20</td>
<td>8.6</td>
<td>8.4</td>
</tr>
</tbody>
</table>

**Item 15**

*Model response*

In line 2, Atwood writes ‘The young are not my rivals. Fish are not the rivals of stones.’

Explain the comparisons that Atwood makes here in the context of the extract.

Atwood likens herself to a solid, inanimate stone and likens the young to lively, directionless fish to provide a contrast that shows that she and the young are not in competition. Even if the fish and stones were in the same creek bed, they have little in common and have no reason to compete for anything — their needs are different.
This is a two-star item which indicates that most students should have coped with it quite well. Students were required to explain the comparisons that Atwood makes in the context of the extract when she says, “The young are not my rivals. Fish are not the rivals of stones.” This item tested achievement in CCE 29 Comparing, contrasting and CCE 31 Interrelating ideas/themes/issues.

In this item the focus was on rivalry or the lack of it. This was borne out by the repetition of the word “rivals” in the sentences quoted in the stem. To demonstrate that the young and Atwood were not in competition, students were required to contrast meaningful attributes of fish—always moving with the current and stones—dull and lifeless for example. They also needed to parallel Atwood with stones and the young with fish and relate the lack of competition to the contrasting attributes—the stones were simply untouched by their lives.

It was essential that students drew clear parallels between Atwood and stones and the young and fish, the order of which was established clearly in the quote, “The young are not my rivals, fish are not the rivals of stones.” Most students who drew correct parallels did so through direct statement, “Atwood is comparing herself to stones and the young to fish.” However, students were able to establish the parallel through inference e.g. “Atwood is not in competition with the young just as stones are not in competition with fish.” No credit was given to students who simply restated or paraphrased the stem.

Students were required to make a contrast of meaningful attributes of fish and stones. They came up with many contrasting attributes: fish—lively, stones—immobile; fish—darting here and there, stones—sitting on the bottom and fish—brightly coloured and constantly moving, stones—dull and unmoving. Many students ascribed attributes to fish and stones that did not contribute to a demonstration of why they were not in competition; fish—take risks, stones—old and experienced. Students also ascribed human attributes to fish and stones and some latitude was given to this in the lower grades. However, when personification was taken too far the response was no longer creditable; fish don’t hate stones; stones attacking fish and fish loving stones. Some ascribed attributes to either fish or stones and then simply stated the negative for the other, constantly moving and stones aren’t; no credit was awarded for this type of response. In order for the lack of competition to be demonstrated, a reason for why Atwood and the young were not rivals had to be given in light of the definitions above.

For an A-grade, the parallel of Atwood with stones and the young with fish had to be clearly drawn. There had to be a contrast of meaningful attributes and the lack of competition had to be demonstrated, whereas the B-grade allowed for the reverse of the parallels — Atwood with fish and the young with stones. For the B-grade, the lack of competition had to be demonstrated, but there was no requirement for students to provide contrasting meaningful attributes.

A C-grade could be awarded to a response in one of three ways. Firstly, a response that paralleled Atwood and stones and the young and fish or the reverse and described an attribute of fish and an attribute of stones was awarded a C-grade. A qualitative shift occurred at this C-grade with students required only to describe attributes of fish and stones. They no longer needed to be related contrasts which would then make them meaningful.

Alternatively, a C-grade could be awarded to a response that contrasted an attribute of stones with an attribute of fish and provided an explanation of why stones and fish were not in competition. Typically, such an explanation lacked some reference to why or how stones and fish were not rivals which meant it fell short of demonstrating the lack of rivalry.

A C-grade could also be awarded to a response that paralleled Atwood and stones and the young and fish or the reverse and provided some explanation of why Atwood and the young or fish and stones are not in competition. There was no requirement for attributes to be ascribed. Most students who achieved a C-grade did so with this type of response.
A D-grade could be awarded in one of three ways. Firstly, a response that paralleled Atwood and stones and the young and fish or the reverse and ascribed an attribute of stones or fish was awarded a D-grade. A response that described an attribute of stones and an attribute of fish was also awarded a D-grade.

A D-grade could also be awarded to a response that provided some explanation of why Atwood and the young or fish and stones are not in competition. Most students who achieved a D-grade did so with this type of response because most explanations were very simplistic and related to them helping each other, not harming each other or not fighting each other.
# UNIT EIGHT  ITEM 15

## PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>29</strong> Comparing, contrasting</td>
<td>The response • parallels Atwood with stones and the young with fish • contrasts meaningful attributes of stones and fish • demonstrates that they are not in competition.</td>
<td>The response • draws parallels: Atwood—stones &amp; the young—fish or Atwood—fish &amp; the young—stones • describes an attribute of stones and an attribute of fish.</td>
<td>The response • draws parallels: • contrasts an attribute of stones with an attribute of fish • provides some explanation of why they are not in competition.</td>
<td>The response • describes an attribute of stones or an attribute of fish.</td>
<td>The response describes an attribute of stones and an attribute of fish.</td>
</tr>
<tr>
<td><strong>31</strong> Interrelating ideas/themes/issues</td>
<td>OR</td>
<td>OR</td>
<td>OR</td>
<td>OR</td>
<td>OR</td>
</tr>
</tbody>
</table>

**Model Response:**

Atwood likens herself to a solid, inanimate stone and likens the young to lively, directionless fish to provide a contrast that shows that she and the young are not in competition. Even if the fish and stones were in the same creek bed, they have little in common and have no reason to compete for anything — their needs are different.
The first column in the table below contains statements that might apply to young people.

In the second column, for each statement, cite a succinct phrase or sentence directly from the extract that would best match that statement.

Write the line number/s relating to your phrase or sentence.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Appropriate citation from extract</th>
</tr>
</thead>
<tbody>
<tr>
<td>… form a well-recognised subgroup within society</td>
<td>the young, a collective noun, like the electorate</td>
</tr>
<tr>
<td></td>
<td>line/s 4–5</td>
</tr>
<tr>
<td>… want to do well but lack self-confidence</td>
<td>ambition and fresh diffidence</td>
</tr>
<tr>
<td></td>
<td>line/s 11</td>
</tr>
<tr>
<td>… have unrealistic expectations of life</td>
<td>reach exceeds grasp</td>
</tr>
<tr>
<td></td>
<td>line/s 11–12</td>
</tr>
</tbody>
</table>
This is a three star item which indicates it is of moderate difficulty. This item tested achievement in CCE 4 Interpreting the meaning of words or other symbols and CCE 10 Using vocabulary appropriate to a context.

Item 16 included a table which contains statements from Margaret Atwood’s article in the left hand column. The introduction indicates that these statements might apply to young people. The stem asks the students to cite a succinct phrase or sentence directly from the extract that would best match each statement and to write these in the second column.

Students were instructed via the cue to write line number/s relating to their phrase or sentence. This information was significant for responses which provided only the line numbers, for three or two of the statements, and were thus given a D- or E-grade respectively. Note 1 on the marking scheme indicated that if line numbers did not match a citation, the response was to be graded on the basis of the citations only. Note 2 on the marking scheme directed markers to accept citations which included an ellipsis or had words missing as citing all the words between the first and the last words written.

Many students did not perform particularly well on this item, with the main problem being that they were not sufficiently succinct as required. There were a number of indicators to suggest to the students to keep the citation short — they were told to cite a succinct phrase or sentence. The words “phrase or sentence” appeared in the stem and in the cue. Additionally, students should be aware that the size of the response area provided for an item is also an indication of the length required to give a high quality/correct response.

A traffic light analogy was given in diagrammatic form in the marking scheme to provide some flexibility for responses but to keep the integrity of the notion of “succinct”. On the marking scheme this was indicated by green shading and was labelled as being the “essential” words in a “matching” response.

Some latitude was given by allowing extra words (indicated by amber shading) which may or may not be included at the beginning or the end of the “essential” words and the response would still be considered “matching”. This is an example of the importance of reading the stem very carefully to pick up a key word such as “succinct” because the inclusion of “superfluous” words (indicated by red shading) made the response incorrect.

Two other responses need to be explained. Firstly, an incomplete “essential” response is one which contains a portion of what is considered essential e.g. “They are the young, a collective noun”. A “plausible” response (blue shading) is not the most appropriate response but can contribute towards grades other than A.

To achieve an A-grade students were required to cite a matching or essential phrase or sentence from the extract for each of the three statements. This is identified by the green and amber shading. The model answer is an example of the responses given in the matching form (first citation) and the most succinct or essential form possible (second and third citation).

B-grade responses required the citation of a matching or essential phrase or sentence from the extract for two of the three statements and provide either an incomplete essential quote or a plausible citation for the remaining statement.

There were two ways to achieve a C-grade. The response could cite a matching or essential phrase or sentence from the extract for one of the three statements, or it could cite a matching or essential phrase or sentence from the extract for one of the statements and provide either an incomplete essential or a plausible citation for the remaining statement.

There were two ways to achieve a D-grade response. Responses were required to cite a matching or essential phrase or sentence from the extract for one of the three statements or provide three line number references which correspond to matching or plausible phrases or sentences from the extract.

There were two ways to achieve an E-grade response. Responses were required to cite either an incomplete essential or plausible quote from the extract for one of the three statements or provide two line number references which correspond to matching or plausible phrases or sentences from the extract.
## Marking Scheme

### UNIT EIGHT ITEM 16

#### PERFORMANCE DOMAIN

<table>
<thead>
<tr>
<th></th>
<th>4 Interpreting the meaning of words ...</th>
<th>10 Using vocabulary appropriate to a context</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The response cites a matching or essential phrase/sentence from the extract for each of the three statements.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>The response cites a matching or essential phrase/sentence from the extract for two of the statements and provides either an incomplete essential or plausible quote for the remaining statement.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>The response cites a matching or essential phrase/sentence from the extract for two of the statements.</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>The response cites a matching or essential phrase/sentence from the extract for one of the statements.</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>The response provides either an incomplete essential or plausible quote for one of the statements.</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Response is unintelligible or does not satisfy the requirements for any other grade.</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>No response has been made at any time.</td>
<td></td>
</tr>
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#### Notes

1. If line numbers do not match a citation, grade on the basis of the citation.
2. Accept a citation which includes an ellipsis or has words missing as citing all words between the first and last words written.
3. Superfluous Matching Superfluous Plausible

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Essential</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at a wedding.</td>
<td>They are the young.</td>
<td>a collective noun, like the electorate</td>
<td>I’ll encourage the newly conscious young</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It’s the newly conscious young I mean, the ones with ambition and fresh diffidence</td>
<td>those who’ve learned (And if and) when they succeed for the first time, how anxious it makes them</td>
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<td>fresh diffidence</td>
<td>those who’ve learned the hard way that reach exceeds grasp</td>
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<td>line 11</td>
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**Model Response:**

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In the extract, there is a discrepancy between the meaning that seems to be expressed in the words and the intended meaning.

Identify the expressed meaning and the intended meaning and describe the techniques Atwood has used to convey these meanings.

The expressed meaning within this article is that the author is freely giving advice in a motherly fashion to the young people of the world. However, through the use of exaggeration, repetition and imagery, the intended meaning is expressed. The intended meaning is that the author resents young people and thinks they are lazy and get everything given to them, rather than having to work. This is portrayed using the following techniques:

- Imagery. Images of young people being handed what they want are used, for example encouragement is flung at them “like rice at a wedding”, rather than the young people having to work for this.
- Exaggeration is used to create the feeling that young people are completely inept and big decisions should be left to “grown ups”.
  For example: “What is a big, stupid clumsy mess”.
- Repetition is used to create a sense of “us” and “them”, especially through the use of the word “I” vs the words “the young”. This further vilifies young people.

Thus imagery, exaggeration and repetition are used to override her “motherly advice” so that in fact the intended message is critical and resentful.
Item 17 is a four-star item indicating that it is somewhat difficult. The item tested achievement in CCE 43 Analysing, CCE 30 Classifying and CCE 31 Interrelating ideas/themes/issues.

In the introduction to this item students were informed of a discrepancy between the meaning that seems to be expressed in the words and the intended meaning. This extract is strongly critical of the young and their efforts in the guise of an acclamation of their efforts. Atwood adopts a personal tone but the satire is strongly evident in her excessive language choice, the rhetorical questions, contradictory statements, dismissive attitude, colloquialism and direct address to the young. Many language techniques are evident in the text and are significant in conveying meaning.

The stem requires students to identify the expressed meaning and the intended meaning and describe the techniques Atwood used to convey these meanings. Guidance is provided for students in the first cue, which directs them to refer specifically to techniques such as exaggeration, repetition and imagery. The second cue asks that they give specific examples from the extract to support their response. The key elements of this item were to identify the expressed and intended meanings, show the discrepancy between these meanings, show how techniques are used to convey these meanings and provide specific examples of the techniques to support the response.

A problem with many responses was the failure to take the signals for structure from the stem and take note of the cues. A request to “identify the expressed and intended meanings”, should trigger the need to write: the expressed meaning is … and the intended meaning is … Unfortunately too many students began by discussing techniques or making general comments on the text. Again, the cue directed students to refer to techniques, providing specific techniques that were very obviously in the text. Many responses failed to identify any technique and largely ignored the directive to provide specific examples.

The techniques most commonly exemplified were repetition and exaggeration, with many students recognising the extravagant gesture of “(flinging) rice at a wedding”. In some instances students referred to imagery but then chose a reference from the text which did not include an image.

Recognition of the tone of the extract was essential in understanding how the duality of meaning can be derived from the extract. Fortunately a number of students recognised how the apparent praise that Atwood seems to be showering on “the young” is subverted by the flamboyance and exaggeration present in the text, rendering her praise meaningless. Some students recognised the tonal change in the extract and could articulate that Atwood is speaking sarcastically. Few used the term “satire”, but described the tone as “sarcastic” and expressed the idea that Atwood is mocking the young. Recognition of the tone allowed students to understand that there were two meanings in the text.

There were very few omits, suggesting that the items were accessible and students were able to connect with the text. To achieve an A-grade, students were required to correctly identify the expressed and intended meanings and provide an insightful explanation (including appropriate examples) of how Atwood uses particular techniques to convey these meanings. An “insightful” explanation is credited when the student links the identification and exemplification of a technique of language back to the expressed and intended meanings.

In some instances students recognised the duality of meaning, the strong satirical tone and the techniques used to convey these meanings; however, they perceived the “expressed” meaning as criticism of the young and the “intended” meaning as a genuine attempt to encourage and praise the young. Such a response could still achieve a B-grade provided the descriptors referring to techniques and meaning were met.

A common problem in the responses was that of students confusing “literal” and “metaphorical” meanings and ascribing these as expressed and intended. Another common failing was where students provided a paraphrase of various sections of the text or identified a technique and then explained the meaning conveyed by that technique in part of the text.

Although specific techniques were given in the cue, some students provided other techniques. In the grading of student scripts, a vast range of techniques was acceptable. Such techniques ranged from “exclamation
marks” to the use of the personal pronoun “I”. Responses that named a technique and proceeded to provide a quote where that technique was not evident could not be credited for that example.

There were two descriptors that allowed the award of a B-grade. One of these referred to responses that showed recognition that there were two opposing meanings, acknowledging the satirical tone but confusing the intended meaning and the expressed; but provided an insightful explanation of how Atwood used techniques to convey meaning, despite the reversed meanings. Alternatively the B-grade could be awarded to responses which correctly recognised the meanings together with an explanation that was usually the identification of a technique and the insertion of a quote or reference to a technique to exemplify it.

The C-, D- and E-grades are progressive subsets of the B-grade descriptor, i.e. the marking scheme for B- to E-grade is nested.

Most students presented their responses in prose form but in some instances students added bullet points or tables to exemplify and discuss techniques.
### Unit Eight Item 17

#### Performance Domain

<table>
<thead>
<tr>
<th></th>
<th>Analysing</th>
<th>Classifying</th>
<th>Interrelating Ideas/Themes/Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
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<td>B</td>
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<tr>
<td>O</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### Marking Scheme

**A**
- The response
  - correctly identifies the expressed and intended meanings
  - provides an insightful explanation (including appropriate examples) of how Atwood uses particular techniques to convey these meanings.

**B**
- The response
  - identifies plausible and opposing expressed and intended meanings
  - provides an insightful explanation (including appropriate examples) of how Atwood uses particular techniques to convey these meanings.

**C**
- The response
  - correctly identifies the expressed and intended meanings
  - exemplifies a technique used by Atwood.
  - identifies plausible and opposing expressed and intended meanings
  - exemplifies techniques used by Atwood.
  - provides an insightful explanation (including appropriate examples) of how Atwood uses particular techniques to convey meaning.

**D**
- The response
  - identifies plausible and opposing expressed and intended meanings
  - exemplifies a technique used by Atwood.
  - provides an insightful explanation (including appropriate examples) of how Atwood uses particular techniques to convey meaning.

**E**
- The response
  - correctly identifies either the expressed or intended meaning.
  - exemplifies a technique used by Atwood.
  - identifies plausible and opposing expressed and intended meanings.

**N**
- Response is unintelligible or does not satisfy the requirements for any other grade.

**O**
- No response has been made at any time.

**Model Response:**

The expressed meaning within this article is that the author is freely giving advice in a motherly fashion to the young people of the world. However, through the use of exaggeration, repetition and imagery, the intended meaning is expressed. The intended meaning is that the author resents young people and thinks they are lazy and get everything given to them, rather than having to work. This is portrayed using the following techniques:

- **Imagery.** Images of young people being handed what they want are used, for example encouragement is flung at them “like rice at a wedding”, rather than the young people having to work for this.
- **Exaggeration is used to create the feeling that young people are completely inept and big decisions should be left to “grown ups”. For example:** “What is a big, stupid clumsy mess”.
- **Repetition is used to create a sense of “us” and “them”, especially through the use of the word “I” vs the words “the young”. This further vilifies young people.**

Thus imagery, exaggeration and repetition are used to over-ride her “motherly advice” so that in fact the intended message is critical and resentful.

---

**Notes:**

1. The correct expressed and intended meanings may be identified through the explicit identification of one meaning and a mechanism by which the other can be inferred.
2. At the E-grade, no credit is to be given for repeating part of the cue.
Writing Task (WT)

The Writing Task complements the other subtests by testing the ability to produce a piece of continuous English prose of about 600 words in length. Students write in response to an overall concept or theme and written and visual stimulus material. Each piece of stimulus material on the testpaper evokes a different aspect of the overall concept. Students may respond in any form or style other than poetry.

This section describes the 2009 testpaper and the writing that students produced in response to it. The comments on students’ responses are based on an analysis of a statistically significant sample.

Provided in this section is a breakdown of student responses according to the stimulus items selected and the genres of responses produced. The marking guide indicating the criteria and standards that are applied is included here, together with graphs showing the criteria in which students had their best achievement.

Finally, a selection of student responses has been included to exemplify successful writing as defined by the task requirements and the criteria.

Overall concept: Time

The overall concept or topic of the 2009 testpaper was Time. This was judged to be something which all students could write about since it affects us all every day of our lives. Students would recognise that time can be both an abstract and a tangible concept.

Students could take any one of several approaches to the concept. For example, they could deal with existence and the relentless nature of time, explore events in history, or examine how people change (or don’t change) with time. They could consider time as a period as reckoned by a conventional standard; this might suggest to them ideas of a race against time in sport or other activities, the significance of time intervals in science, or the influence on our lives and actions of time-related natural events such as the rotation of the earth. They could take time to be an event or occasion and focus on the significance of a particular moment in someone’s life.

Diagram of the testpaper

The diagram below represents the 2009 testpaper. The 14 stimulus pieces are numbered for reference. All pieces relate to the overall concept of the testpaper.
Stimulus pieces

Overview

The diagram below shows the frequency (as a percentage) with which students in the sample group indicated each of the stimulus pieces as a starting point or resource for their writing. Most students make use of a combination of two or more stimulus pieces in developing a response to the testpaper; hence, the percentages shown in the diagram add up to more than 100%.

Specific stimulus pieces and their response patterns

1. Life extension

The written text of this stimulus piece asks whether it is desirable for people to live significantly longer than they do now. The accompanying jar of face cream suggests the preoccupation that some people have with maintaining their youthful looks, even as they age.

Responses included feature articles about the importance of remaining or appearing young, short stories about life in the future when people live for hundreds of years, and essays about the impact of prolonged life expectancy on the environment and society.

2. Sundial

The sundial and the associated questions were thought likely to generate imaginative responses, including science fiction stories, or arguments about the benefits or problems generated by particular inventions associated with time.

Connections with time travel, comments on people’s preoccupation with a “golden age” or speculations about the future were expected. Students also wrote reflections about life in the past or about advances in modern technology and conveniences.

3. Cave painting

This piece was expected to provide opportunities for students with interests in art or literature to focus on universal ideas or ubiquitous motifs in works they had studied.

Two common types of responses were stories with characters of different generations (mostly grandchildren and grandparents), often linked with stimulus piece 9, and essays commenting on literary works and themes.
4. Saturdays
This short statement was thought likely to generate some reflections on the delights of uncommitted time and possibly to remind some students of periods in their lives when their regular routines have been disrupted.
Rarely chosen on its own, this piece prompted comments about balancing work and other activities and the value of leisure time.

5. A time to talk
Robert Frost's poem, as relevant today as when it was written, advises that maintaining a friendship is more important than meeting the everyday demands of work and daily life. Responses were expected to deal with issues of prioritising work and friendship.
Despite providing students with the opportunity to continue the narrative established in the poem, this was the least popular stimulus piece. Incidentally, it is the only stimulus item without a visual image. Responses included short stories about valuing friendships and the time spent with loved ones.

6. Winning and losing
It was expected that many students responding to this stimulus piece would deal with the significance of time in victories and defeats.
The piece prompted many short stories and personal reflections about a variety of sporting competitions where the winner was decided by a small margin of time.

7. Narrative structure
This piece was expected to be considered in conjunction with other stimulus pieces. The visual image that accompanied the text, which was thought to be instantly recognisable to most students, provided for stories with a focus on time travel. The piece could also have prompted some analytical discussions of literary strategies or reviews of stories or novels that are unusual in their structure.
Many responses made specific reference to the movie Back to the Future. The piece also prompted responses such as a speech to a Year 12 cohort providing tips for effective story writing, narratives that were written in a non-linear, non-chronological manner, and numerous stories about time travel.

8. Sayings
These common sayings and phrases could be used alone or in conjunction with other pieces. Any one of them could prompt an exposition in the form of a discussion, debate or speech or could be incorporated as the theme for a speech, a feature article or an imaginative response such as a play or short story.
This stimulus piece was most commonly used in conjunction with other pieces and many titles of responses were gleaned from the variety of quotes. Similarly, where there was a moral or message in the response, it was often drawn from one of the phrases in stimulus piece 8 and presented in the final sentence/paragraph. Responses suffered when students attempted to incorporate several, or all, of the quotes.

9. Childhood
The image of two children idling away their time was thought likely to encourage students to draw on their personal experience for reflective pieces, stories and memoirs about the significance of time to children and adults, or expositions comparing the freedom of children's lives with the constraints of adult existence.
This proved to be the most popular stimulus piece, prompting students to write reflections about their childhoods, eulogies for loved ones, motivational speeches about never losing one's "inner child", and feature articles about the changing nature of childhood pastimes and friendships.
10. Music
The written text accompanying the music in this stimulus piece was expected to generate narratives and reflections on a piece of music that reminded the writer of a personal experience.

This was commonly used in conjunction with other pieces (most notably stimulus piece 9). It generated feature articles and essays about the music industry and explanations about time signatures used in different music styles. Also noteworthy were short stories about grandparents being prompted by pieces of music to reflect on their younger years for their grandchildren.

11. Rock formation
This stimulus piece focuses on physical records of change and time. It was thought that students with interests in history, earth science or geography might be especially drawn to it. The concluding comment of the written text was expected to prompt expositions or reports on what we have learned from the past that has influenced the present and could possibly have generated reports, conference papers, or articles for journals or newspapers.

As expected, responses to this piece included a number of essays and feature articles about the impact of climate change. On a different level, there were also responses that focused on the notion that the “future is not written in stone” by using it as the coda for stories and personal reflections.

12. Clock tower
The image of the Gympie Courthouse clock tower and the associated written text were thought likely to generate discussions of the significance of time to specific experiments and discoveries or of how our lives are regulated by clocks and calendars or stories in which keeping time or doing something at a particular time is crucial.

This piece was mostly used in combination with other pieces rather than on its own. However, it did prompt responses about the mechanical, quantifiable nature of time. It is worth noting that students who wrote about the experience of writing their responses to this testpaper indicated this piece as the stimulus for their writing.

13. Ecclesiastes
Students were thought likely to respond to this piece in conjunction with other pieces and, in doing so, to focus on the notion that there is a right time for everything and that everything happens when it should.

This was one of the least popular stimulus pieces, used only by a small number of students, and most often in combination with other pieces.

14. Dali
This stimulus piece was expected to generate expository, reflective or imaginative responses about issues related to youth and age, the passing of time and how we can live our lives to make the best use of the time we have.

Responses tended to be prompted by either the artwork or the text, rather than by a combination of the two. They included reviews of artworks and artists, essays about the technique of “time in art”, some making glancing references to the featured landscape in the Dali painting (often as the setting for a futuristic story). The written text proved more popular, stimulating responses discussing the effective use of time or commenting on the fixed rate of time or the notion that “time is money”. There was a tendency for students to engage in broad philosophical musings about the essence of time when responding to this item, particularly in some of the lower achieving responses.
**Touring the testpaper**

A common question about the Writing Task is what is the “right” number of stimulus pieces to respond to in order to achieve the best, or highest, results. While there can be no definitive answer, the evidence gathered from student responses certainly sheds light upon the potential impact of the practice of “touring the testpaper”.

In the responses where students identified, and responded to, five or more stimulus pieces, 95% attained no higher than the mid-achievement range. The criterion that scored lowest, for one-third of these students, was Structuring and sequencing. This can be attributed to students repeating words, phrases and ideas and producing responses that lacked a clear shape (e.g. introduction, body and conclusion) or linking of ideas. In some instances, it was possible to follow students’ tours around the testpaper, where each individual selected piece was identifiable as a stand-alone point of discussion.

A key problem with touring the testpaper is that, even though each stimulus piece is designed to generate responses based on the common concept, *Time*, the individual nature of each piece means that there will very likely be little in common between them. The stimulus pieces are chosen specifically to provide and prompt a broad and varied range of ideas; therefore, selecting several pieces decreases the likelihood of being able to tie them together successfully and cohesively with a clear and controlled focus.

Of those responses from the sample that were graded in the higher achieving range, 73% identified, and responded to, just one or two stimulus pieces. *Recollection*, published in this report, provides an example of how a student can respond successfully to just one piece. However, what readers can also infer is that the student has made incidental, and therefore subtle, links with another piece (stimulus piece 7) without actually identifying it as a related stimulus piece.

**Choice of genre**

In 2009, an objective of the Writing Task research project was to identify specifically the genres or forms that students produced, and to discover how common these genres were. In previous years, both form and purpose (e.g. expository, argumentative) were identified. Eleven common — and expected — genres were chosen for the purpose of the research project this year to provide specific information about the types of responses students actually write.

Despite the freedom that students have to write in any prose form they wish, there is a pattern in the types of writing being produced each year. In 2009, the most popular genre choices were short stories, essays and personal reflections. The least popular genres were procedural texts, reviews and interviews. It was also noted that there was a decrease in the number of letters or diary entries amongst the responses.

The sample responses provide evidence that, to be successful in their writing, students need to establish a definite context, including clear purpose and audience.
Student achievement and genre

The diagrams below indicate the genres used in lower, middle and higher achieving responses. Note that percentages shown are rounded.

**Short story** — The short story proved to be the most popular genre, with one-third of all responses taking this form. The most successful of these provided vivid imagery (incorporating the five senses in describing situations, events, etc.), a tight structure and, often, subtle connections to the concept and stimulus pieces. A number of stories took on a cyclic narrative structure, largely in response to stimulus piece 7. Many lower achieving stories suffered from the writer having incorporated too much detail rather than keeping events succinct. Students must also keep in mind that the primary purpose of short story writing is to entertain an audience.

**Essay** — Not surprisingly, this was a very popular form of response. Students are familiar with essays across the subjects they study and this form can be written for a variety of purposes and audiences. Essays that were well written followed a clear structure with an introduction (including a thesis statement), the body of writing that contained an explanation of main points, and a concluding paragraph that presented a summary.

**Personal reflection** — In many instances, personal reflections took the form of narrative or anecdotal prose and consequently had quite a “loose” structure. In other instances, there were responses such as eulogies (often in response to stimulus piece 9) and interior monologues. Personal reflections were less common amongst higher achieving responses than amongst lower achieving responses.

**Speeches** — The range of possible speeches is broad, and this year saw examples of motivational speeches, speeches delivered to a committee, the board of a company or organisation, students, etc. Those responses that were most successful established and maintained a clear (and not contrived) context, purpose and audience.

**Feature articles** — Those responses identified as feature articles followed the expected structural guidelines, including establishing themselves as public texts, and presenting opinions. Although a number of feature articles followed layout conventions, for example using columns and by-lines, this is not essential. However, structuring and sequencing may be influenced by writing paragraphs to suit the genre.

**Letters** — As shown in previous years, responding in letter form does not usually allow a student to demonstrate a broad range of vocabulary. Responsiveness may also suffer due to the contrived nature of many letters. There were no letters in the higher achieving sample. There was a tendency for students to begin with a salutation, but then to write personal reflections or short stories, forgetting the conventions of letter writing, including the need to write for the identified audience. Some students cleverly presented emails between two or more people which allowed them to demonstrate a shift in voice and tone.
Diary — As with letter writing, diary entries do not usually allow students the opportunity to demonstrate a broad vocabulary and there is a tendency to recount events step by step. The more successful diary entries were those written “in character”, rather than from the perspective of the student writer; however, there were no diary entries identified in the higher achieving group. Students should keep in mind that diary writers in real life rarely use the “Dear Diary” salutation, which is regarded as an immature and contrived device.

Reports — A small number of the responses in the sample were reports, ranging from scientific or medical reports, to information reports and newspaper reports. It is possible that some students may have intended to write a report but ended up producing an essay instead. Depending on the nature (intent) of the report, students need to establish clearly their context, purpose and audience. In many instances, the use of subheadings and final recommendations would be expected.

Review — Surprisingly, there were very few reviews amongst the sample scripts. These tended to be reviews of films, and especially of *Back to the Future*, but they included analyses of changes in popular culture over time (e.g. in fashion, art, music). Some responses intended as reviews may have been included in the survey as feature articles.

Procedural texts — It was expected this year that the concept *Time* would prompt some procedural responses (steps for successful time management, perhaps), but this did not occur in the sample. The very small number of procedural texts written mostly offered insights to the steps that need to be taken to create a better future based on present and past experiences.

**Student achievement in criteria**

The more successful responses are those that demonstrate higher achievement in the criteria identified in the marking guide (page 74). The criteria are Central idea (CI); Vocabulary (V); Responsiveness (R); Grammar, punctuation, spelling (GPS); and Structuring and sequencing (SS) plus Length (L).

For the responses sampled, the data from the grades awarded for the criteria were analysed, first for the total set and then for each of the lower achieving, middle achieving and higher achieving sets. The diagram below shows, for each criterion, the percentage of responses for which that criterion represented the highest achievement. Because many students gain identical grades across several criteria, the percentages shown in the diagram add up to more than 100%.

For the total sample, Vocabulary was the criterion in which the greatest percentage of responses (40%) demonstrated highest achievement. Grammar, punctuation, spelling was the criterion in which the lowest percentage of responses (14%) demonstrated best achievement. This criterion was consistently the least successful criterion, regardless of the overall quality of the responses.

**Best performing criteria: total sample**

- **Vocabulary (V)**: 40%
- **Central Idea (CI)**: 25%
- **Responsiveness (R)**: 28%
- **Grammar, Punctuation, Spelling (GPS)**: 14%
- **Structuring and Sequencing (SS)**: 25%

![Graph showing best performing criteria](image-url)
Overwhelmingly, the lower achieving responses gained their highest grade for Responsiveness. A large proportion of lower achieving responses indicated that the writing was in response to numerous stimulus items. Evidently, this alone does not ensure successful writing.

**Best performing criteria: low achieving**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Low Achieving</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>34%</td>
</tr>
<tr>
<td>V</td>
<td>36%</td>
</tr>
<tr>
<td>R</td>
<td>51%</td>
</tr>
<tr>
<td>GPS</td>
<td>4%</td>
</tr>
<tr>
<td>SS</td>
<td>17%</td>
</tr>
</tbody>
</table>

For the middle achieving responses, as for the total sample, it was Vocabulary in which the greatest percentage of responses (41%) demonstrated highest achievement.

**Best performing criteria: mid achieving**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Mid Achieving</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>25%</td>
</tr>
<tr>
<td>V</td>
<td>41%</td>
</tr>
<tr>
<td>R</td>
<td>27%</td>
</tr>
<tr>
<td>GPS</td>
<td>14%</td>
</tr>
<tr>
<td>SS</td>
<td>25%</td>
</tr>
</tbody>
</table>

The data for the higher achieving set of responses showed that it was the criterion of Structuring and sequencing in which the greatest percentage of responses (42%) gained their highest grade, followed by the criterion Central idea. This seems to indicate that students who produce highly successful responses are able to effectively structure and sequence the development of a central idea.

**Best performing criteria: high achieving**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>High Achieving</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>34%</td>
</tr>
<tr>
<td>V</td>
<td>26%</td>
</tr>
<tr>
<td>R</td>
<td>29%</td>
</tr>
<tr>
<td>GPS</td>
<td>15%</td>
</tr>
<tr>
<td>SS</td>
<td>42%</td>
</tr>
</tbody>
</table>
Achievement in specific criteria

Central idea
Markers ask three key questions of the responses they are reading: What is this about? How well is it developed? Where does it go? In assessing achievement in this criterion, markers are not judging the quality of the idea, but how well that idea has been presented and developed. The development of the central idea of the piece of writing should be deliberate, focused and have a clear direction and resolution. Responses achieving in the mid-range were found to be slow to start, repetitive or to have no clear resolution or conclusion. Lower achieving responses were those that had no identifiable central idea or had many ideas that had not been developed.

Vocabulary
Markers look for effective language choices: the right word in the right place, selected and placed for effect. Vocabulary considered most effective may be simple or specialist; the key is that it should be deliberately chosen, controlled and discriminating. Effective vocabulary includes the use of appropriate prepositions and linking words as well as verbs, nouns, adverbs and adjectives.
Responses achieving middle grades for vocabulary used reasonably clear and appropriate vocabulary that conveyed meaning but perhaps lacked variety or control. At the lower levels, vocabulary tended to be inappropriate to the piece, demonstrating incorrect choices and misuse of language. It should be noted that there is no penalty for the use of expletives; however, like all other vocabulary choices, these must also be selected for effect and be suitable to the context of the piece of writing.

Responsiveness
The most important consideration for this criterion is that the student’s writing responds to the testpaper. Indeed, Responsiveness is weighted more heavily than the other criteria to help ensure that what the students write is a response to the testpaper on the day. Markers look for evidence of what students have done with the ideas presented in the testpaper. There must be a strong and sustained connectedness to both the concept and the stimulus pieces to achieve most credit in this criterion. Responsiveness can be explicit or subtle but it must be integral to the response.
Middle grades in this criterion result from weak connectedness to the concept and stimulus pieces or connectedness to either the concept or stimulus pieces. It is important to note that students who chose to “tour the testpaper”, that is, those who selected a large number of stimulus pieces to respond to, ran the risk of not demonstrating strong responsiveness. Similarly, repetition of the concept (e.g. the word “time”) was not enough to establish responsiveness. “Topping and tailing” where students introduce the concept and/or stimulus piece at the beginning and conclude by restating or referring to the concept and/or stimulus piece with little connection in the body of work, is unlikely to establish effective responsiveness.

Grammar, punctuation, spelling
In this criterion, Grammar is considered more important than Punctuation which, in turn, is considered more important than Spelling in determining the grade. Markers look for how well students demonstrate a command over the conventions of writing (at within-sentence level) and for their ability to punctuate and spell correctly.
To achieve at the highest level, students needed to be precise in their usage, making few errors. These students demonstrated an understanding of using the range of conventions to achieve particular effects. Middle achieving responses in this criterion had errors that impeded readers’ understanding of the text and many demonstrated a lack of variety in sentence construction. Inconsistency in tense and point of view, overuse (or underuse) of capital letters and fragmented sentences were examples of the errors in responses that performed poorly in this criterion.
**Structuring and sequencing**

In essence, the criterion Structuring and sequencing relates to the “architecture” of the piece — the arrangement, links and flow of ideas. The response should demonstrate evidence of clear planning through deliberate, fluent and logical sequencing of ideas. Structuring and sequencing will be affected by choice of genre and may be affected by the overall length of the piece, especially where there is repetition of, or gaps in, ideas. Repetition, poor paragraphing or a seemingly random organisation of ideas results in a response that achieves at the lower levels in this criterion. Students should commit time to creating and developing a clear plan for their writing.

**Length**

Student responses should be approximately 600 words in length. Responses between 500 words and 750 words incur no penalty. Responses that are either too short or too long run the risk of being weak in other criteria — especially Responsiveness and Structuring and sequencing.

**Criteria and standards**

Each response is marked by three markers. Each marker provides either four criteria-based grades or three criteria-based grades plus a judgment about length. Therefore, different mixes are judged in each of the three readings. Markers make a judgment about the contribution to the holistic worth of the response of each of the criteria they are to consider. On the marksheet they record each of these as a grade (from 1 to 6) with a qualifier (+, 0, -) for each grade. If required, they make a decision about the length of the response.

The following table shows the percentage of students who achieved the various grades for each of the criteria.

<table>
<thead>
<tr>
<th>Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>0.6</td>
<td>13.1</td>
<td>53.6</td>
<td>29.7</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>V</td>
<td>0.5</td>
<td>11.3</td>
<td>68.7</td>
<td>18.1</td>
<td>1.3</td>
<td>0.1</td>
</tr>
<tr>
<td>R</td>
<td>0.6</td>
<td>10.4</td>
<td>53.4</td>
<td>32.2</td>
<td>3.1</td>
<td>0.2</td>
</tr>
<tr>
<td>GPS</td>
<td>0.3</td>
<td>9</td>
<td>57</td>
<td>29.8</td>
<td>3.7</td>
<td>0.2</td>
</tr>
<tr>
<td>SS</td>
<td>0.5</td>
<td>10</td>
<td>53.1</td>
<td>32.6</td>
<td>3.6</td>
<td>0.2</td>
</tr>
</tbody>
</table>

The table below shows the percentage of students who achieved the various grades overall.

<table>
<thead>
<tr>
<th>Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>8.4</td>
<td>62.6</td>
<td>27.1</td>
<td>1.6</td>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>
# Writing Task marking guide: Criteria and standards

**Grading a script**
- Read the script as a whole.
- Think about the worth of the script holistically.
- Make a judgment about the contribution to the holistic worth of the script of each criterion you are considering (CI, V, R, GPS, SS).
- Assign a grade and a qualifier, then record each judgment.

## Contribution to the holistic grade made by...

<table>
<thead>
<tr>
<th>CENTRAL IDEA</th>
<th>VOCABULARY</th>
<th>RESPONSIVENESS</th>
<th>GRAMMAR, PUNCTUATION, SPELLING</th>
<th>STRUCTURING &amp; SEQUENCING</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a 1 +</td>
<td>For a 1 +</td>
<td>For a 1 +</td>
<td>For a 1 +</td>
<td>For a 1 +</td>
<td></td>
</tr>
<tr>
<td>the writing demonstrates the deliberate, focused development of a clear central idea (explicit or implicit).</td>
<td>the writing demonstrates the use of words selected for their effect and exactly fitted to their location (the right words in the right places).</td>
<td>the writing demonstrates sensibilities to nuances of the concept and stimulus material.</td>
<td>the writing consistently demonstrates a command of: • the conventions of writing (subject/verb agreement, participle use, antecedent agreement, pronoun choice, tense, etc.) • correct punctuation • correct spelling.</td>
<td>the writing demonstrates coherence and cohesion through: • controlled structuring; and • deliberate sequencing of ideas and images.</td>
<td></td>
</tr>
<tr>
<td>identifiable for intended audience; direction and resolution revealed</td>
<td>controlled (discriminating, imaginative)</td>
<td>strong (immediate or subtle) and sustained connectedness to both the concept and stimulus material</td>
<td>precise and effective use</td>
<td>fluent, logical and flexible</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>identifiable but unevenly developed</td>
<td>appropriate</td>
<td>connectedness to the concept and stimulus material</td>
<td>lapses intrude but do not detract from meaning</td>
<td>too long</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>750–1000 words</td>
<td></td>
</tr>
<tr>
<td>identifiable but poorly developed or not readily identifiable but some development evident</td>
<td>inappropriate, interfering with meaning at times</td>
<td>connectedness to either the concept or stimulus material or weak connectedness to both the concept and stimulus material</td>
<td>lapses obtrude and detract from meaning</td>
<td>too short</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>400–500 words</td>
<td></td>
</tr>
<tr>
<td>not identifiable</td>
<td>limited</td>
<td>no connectedness to the concept or stimulus material</td>
<td>lapses obtrude and detract from meaning</td>
<td>weaknesses are evident</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>weaknesses detract</td>
<td></td>
</tr>
<tr>
<td>not identifiable</td>
<td>limited</td>
<td>no connectedness to the concept or stimulus material</td>
<td>ined</td>
<td>incoherent</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>about right</td>
</tr>
<tr>
<td>too long</td>
</tr>
<tr>
<td>too short</td>
</tr>
<tr>
<td>far too long</td>
</tr>
<tr>
<td>far too short</td>
</tr>
</tbody>
</table>
Distribution of raw grades in each criterion

Central idea

Vocabulary

Responsiveness

Grammar, punctuation, spelling

Structuring and sequencing
Selected student responses

The responses to the 2009 Writing Task that follow were selected from those that met the standards for successful writing as defined by the criteria and standards for judging responses.

These complete responses appear in their original handwritten form. They may contain errors in expression and factual inaccuracies but, for the sake of authenticity, they have been published as they were written. The selection of these examples does not indicate a preference for any particular form of writing, nor are the sentiments expressed in these responses necessarily endorsed by the QSA. Before publication, the QSA attempted to establish, but cannot guarantee, the originality of the writing in the responses.

Response 1

Infinity, Mr Grey is a narrative with the central idea that the human desire for immortality may backfire. When Mr Grey finds his first grey hair, he thinks that the recently implanted Ad-Infinitum™ Chronophages is faulty. However, he discovers that the promise of immortality that came with the product did not include a guarantee of youth. As he gradually comes to realise the implications of this, his anger turns to despair. The development of the central idea to its chilling resolution is deliberate and the use of simple, direct language is effective.

Response 2

Austen wants out! is a literary analysis. It has a strong central idea, that the novelist Jane Austen was a woman who seems to have been born out of her time. She “dreamed of other times” and, in Pride and Prejudice, she expressed her beliefs about women and society through her character, Elizabeth Bennet. The succinct thesis statement is followed by a logical and fluent progression of ideas. The use of quotes and page references (mostly accurate) adds to the strength of the writing.

Response 3

Life: a time restricted or a timeless journey? is an exposition that initially questions whether time governs our lives. It then examines Christian and Buddhist beliefs in the importance of living a “good life” in order to attain a timeless existence after death. The writer is knowledgeable about the subject matter and expresses clear views in a straightforward way. Vocabulary that is sometimes complex has been chosen and placed with discrimination.

Response 4

Recollection illustrates the effective incorporation of a flashback in its fictional reflection on events of the past and present. There are subtle connections throughout to the concept and to the piece indicated (stimulus piece 10). As the narrator moves between the two scenes and times, it is never made clear which wars are referred to, thus reinforcing the impression of timelessness. Atmosphere is evoked mainly through descriptions of the actions in each of the contrasting scenes. Language use is simple, accurate and economical.

Response 5

When Winter Comes consists of four separate but well connected descriptions of people and events as viewed by four people of different ages, each one observing and commenting on some of the others, and reflecting on their own past or looking to their future. Each observer represents a different season of the year and each uses the quote from Ecclesiastes in a comment on their stage of life. The clear central idea is very deliberately developed and careful structuring and sequencing results in a cohesive piece of writing.
INFINITY, MR. GREY

Mr. Grey awakes in a cold, bright white room. The room is sparsely decorated: only a bed, a white vinyl chair and large black speakers for an intercom. Above him there is a skylight through it, he sees that the sky is stormy. The room is quiet, the only sounds are the ticking of a wall clock and some light jazz piped through the speakers. Suddenly, the intercom flickers on.

"Hello, Mr. Grey," says a soft spoken male voice. "Welcome to the first day of the rest of your life."

Mr. Grey smiles at the old cliché.

The voice continues, "Not that days will be remarkable for you now. We are pleased to say that the implantation of the Ad Infinitum Chromaphages was a success."

Mr. Grey is pleased.

"You can enjoy the rest of your life free of the fear of death that pervades all mankind," the voice says pleasantly. "You are now immortal. You will live forever. You can not die."

Mr. Grey congratulates himself on his success with a pat on the back.

"But," says the voice, "it's time changing. "How will you appreciate your time on earth when time now has no meaning?"

Mr. Grey becomes aware that the ticking of the clock has grown louder.

"I shall experience each second," he says, "safe in the knowledge that I have all the time in the world."

The voice chuckles. "Very well, Mr. Grey. Very well."

There is silence but for the ticking of the clock.

Mr. Grey gets dressed in clothes he finds neatly folded on the chair. If there is a small bathroom connected to his room, where he brushes his teeth and combs his hair. To his surprise, he finds a grey hair in his comb.

"What's that, Mr. Grey?" the voice taunts when he returns. "A grey hair? How amusing. Did you think eternity meant eternal youth?"
Mr. Grey is angry. He demands a explanation. He paid good money for this operation, and now he finds it didn't work.

"Oh, but it did work, Mr. Grey. Don't you feel it? The long, slow ache of him on weary bones? The dragging down, the aching? It will continue, forever. The body, Mr. Grey, will always break down. It will not stop now, but it will always break down."

Mr. Grey shakes his head but a mental image comes to his eyes—himself, old and decrepit, his teeth are gone, his body is skeletal. He reeks backwards, terrified.

"The body," the voice says, "will wither with the ravages of time and the mind will melt away. But you will be alive. Oh yes, for oceans and oceans. You may be more that a burst. But you will be alive, Mr. Grey. Is that not what you wanted?"

Mr. Grey backs away from the speaker. He screams, a high primal sound. The stench of his breath, the touch of his face, his hands, his clothes, they clutches at time, but it seems to pull away as if saying, 'You rejected me, what do I owe you?'

He screams again and slams his head against the wall, again and again and again, for hours, or minutes, or years. He can not tell.

"And the skies will boil and the earth shall crumble," the speaker screams, "like an avenging prophet." and still he shall not die. Time will turn everything to dust, but he will not be moved. How grand the human species is, to turn its back on time!"

Mr. Grey slides to the ground, his forehead bloody. there is quiet, but for the animal meaning of Mr. Grey, and the ticking of the clock.

"Now," says the voice, "You have all the time in the world."

Mr. Grey is silent then too still.

"You really should have thought this through, Mr. Grey," the voice says. The clock ticks.
It has always been common for authors to unveil themselves in the characters of their novels. When considering the character of Elizabeth "Lizzy" Bennet in Pride and Prejudice, by the acclaimed English novelist Jane Austen, it is possible to understand Austen’s social frustration at the societal values of Regency England. Despite the Regency setting of Pride and Prejudice, it is clear Austen “dreamed of other times”, and this is largely (due to) reflected in Lizzy’s modernistic beliefs and attitudes.

Elizabeth Bennet’s egalitarian attitude throughout Pride and Prejudice allows an insight into Austen’s criticism of Regency society and suggests her longing for a future void of its social beliefs and values. Towards the end of the novel, Elizabeth is confronted by an upper-class woman named Lady Catherine de Bourg, who attempts to dissuade her from becoming engaged to Mr. Darcy on the grounds that her social (even) shortcomings would ruin his reputation. Although, when reflecting on Regency ideals, this request would be considered logical and reasonable, Elizabeth reacts with shocked disbelief, and responds saying “He is a gentleman, I am a gentleman’s daughter, so far we are equal.” Such a blatant response would be considered extremely rude at the time, yet the reader is positioned to agree with Lizzy. This reflects Austen’s disregard of Regency society, and through Lizzy’s Egalitarianism she is able to (passively) convey her longing for a world free of prejudice and snobbery.

A second characteristic of Lizzy’s which displays Austen’s modern sensibilities is her intelligence. Due to Regency patriarchy, it was highly irregular for females to be educated by a school or
university, and spent the majority of their time sewing, learning music and dancing. However, Elizabeth challenges this by engaging in a great deal of reading out of her father's library, and through this she establishes a degree of intelligence altogether absent from the other female characters of the novel. It is this strength of mind that attracts Mr. Darcy, whom she finally marries. An example of Lizzie's intelligence occurs on page 51 of the novel, during a walk with a friend which is interrupted by Mr. Darcy and Caroline Bingley. When the path in the garden becomes narrow, Elizabeth happily leaves the party, as "the picturesque would be spoiled by admitting a fourth." As Elizabeth is referring to an artistic style which largely depicts cows in pastures, her cultural awareness and intelligence is displayed. So too is her wit in associating the aristocratic trio with cows. This "swiftness of mind" (pg 233) is what Darcy finds most attractive about Elizabeth, and what initially drew his attention towards her. For a woman to attract a wealthy and upper-class man such as Darcy with intelligence alone is not reflective of Regency attitudes, further suggesting Austen's desire for social evolution or existence in an alternate period of time, in which looks, affluence and useless skills weren't important means of securing conubial felicity.

Probably the best indicator of Austen's hatred of Regency attitudes and desire for more modern sensibilities is the longevity of Pride and Prejudice's popularity. Though written many hundreds of years ago, the novel is still extremely prevalent in western culture today, and readers continue to derive enormous amounts of enjoyment and satisfaction (as well as ample material for analysis) from its pages. This is largely due to Austen's modern attitudes, and her characters (especially Elizabeth) have attributes which a modern audience can relate to (and even agree with). In fact, one can argue that Austen clearly desired greater (even cultural) freedom (whether she was aware of her characters' constraints...).
Using the voice of her main character, Elizabeth Bennet, Jane Austen indicates a strong frustration at the period she lived in and the limitations this had on people’s ability to achieve lifelong happiness. Lizzy, however, manages to overcome Regency attitudes, and this is predominately through her egalitarianism and intelligence, attributes which indicate Austen’s modern sensibilities. Because of this, it is reasonable to assume Austen dreamed of alternate times, and her writing reflects this. Her construction of the character Elizabeth reflects this. This is why Pride and Prejudice continues to be a popular novel to this day, and will undoubtedly continue to be so throughout time.
The reality of a finite existence is a challenging notion for many people to cope with. Some believe that this the length of this existence is predetermined by a higher power or deity, whilst others believe that our time on earth is a direct consequence of our actions. Common to both of these viewpoints is a recognition that time ultimately governs our life. But what if one were to say that our physical human existence is not the end of our time...

As a result of the confronting reality that death results brings about a cessation of time and space, many philosophical notions have been created by humans to help deal with this concept. One such philosophical notion is a belief in human immortality, primarily through religion. All of the world’s five mainstream religions believe in some form of existence after death in a supra-material realm of mind or spirit. Not only does this deal with our time after death, but also with how we spend our live our life in the here and now.

The general Christian belief concerning the hereafter is that the human person is a composite of body and soul, and at the moment of death this unity splits and the soul proceeds to either heaven or
hell. As articulately by Jesus in John chapter 6, verse 40 of the New Testament:

"And this is the will of him who sent me, That anyone who sees the Son and believes in him may have eternal life."

What the Bible is ultimately saying to its followers here, is whilst we as humans are mortal in nature and subject to a finite time here on earth, we have the ability to spend time eternally with God in heaven, by living a life in Christ.

The religious concept of existence without the limit of time is not confined to Christianity. Buddhists believe in reincarnation, the process of being reborn time and again in various times and settings. The fundamental teaching of Buddhism is that life is suffering (or dukkha), and that the only way to end this suffering is to detach oneself from life and reach the eternal bliss of Nirvana.

Both of these religious examples have explicated a belief in an existence after mortal life; but this 'eternal' existence also directly affects how one spends their time in the immediate, physical life. For Christians who believe in life after death, there is the belief that in order to achieve perpetual existence, one must lead a "good life." - but what essentially is a "good life?" It is believed that when God created man, he gave man co-creative powers to rule over creation
with him, with an ultimate purpose of achieving God's plan for existence. Therefore, if one wants to live a "good life" in the Christian faith, one should attempt to live their life in accordance with God's plan for creation, as articulated by the Bible and other Christian doctrines.

Living a "good life" in the Buddhist faith is living a life free from greed, delusion, attachment, and hate. These generate negative karma, and one cannot reach eternal life in Nirvana until this negative karma is negated by positive karma. The way to do this in Buddhism is by following the Noble Eightfold Path, which describes the way to live in order to reach Nirvana. It can be seen that for both religions, one must live their immediate physical life in accordance with their respective doctrines in order to reach the timeless existence associated with the hereafter.

Ultimately, no one really knows when our time is truly up. The question of destiny is so intrinsically unresolved in the human psyche that a multitude of philosophical notions have been created to help answer it. The responses of Christianity and Buddhism to this question is that there is a spiritual existence that transcends time and space, but in order to attain this existence, one must live according to their respective religious doctrine during their time as a mortal and finite human being.
Recollection

Why am I here? As I sat in a puddle of freezing water, staring at the cold gray mud of the trench, I could not help but wonder. Desperately, I searched my mind for a plausible reason for the loss of life I was witnessing, and found nothing. I turned my head to gaze down the trench at my fellow soldiers, but instead I was greeted with a gust of wind that carried with it the stench of gunpowder and rotting flesh. Bang! My grip involuntarily fastened around the chipped wood of my rifle, and in doing so, sent half a dozen splinters into my already bleeding hands. That was the fourth shell which had landed near me this morning; after weeks of the same, I was almost deaf. In stark contrast to the great symphony of chaos outside the trench, were the men inside it; not one of them, including me, had spoken for hours. Looking at them now, it seemed as if each was in his own little world. Sitting in the mud, slowly losing their hope, courage and faith; the barrier between us was almost visible. I was just about to lose myself when I heard the faint song of the man beside me.

"Oro se do bhaisa bhaile," he sang, "Oro se do bhaisa bhaile." I knew it well, from a long time ago...

* * *

I was only six years old and it was Easter Sunday; a young boy's dream. My entire extended family had gathered and that was no mean feat, included amongst them were thirty first cousins, partners of older members and aunts...
wearing too much red lipstick, eager to kiss their favourite nephew. I was headed towards the kitchen, to see if I might grab some chocolate brownies before they were devoured by those outside. As I entered the kitchen I could smell them, rich and heavy with the entire block of chocolate they contained. After a quick search I found the precious baking tray but was interrupted before I could satisfy my taste buds.

"There you are, Sean!" My auntie had found me, "You've grown so much! Come and give your auntie a big kiss." By the time she had finished that sentence, I was long gone. Although I had escaped my auntie's affections, I was still hungry and I marched outside to find some food. I stepped outside into the sun and had to squint whilst my eyes adjusted. All throughout the garden were groups of children who were laughing, running and were just, as my grandmother would say, "happy out." It looked like fun, yet it did not look like food, so I ran over to the main table and jumped up into a seat. One of my uncles, who had obviously been in my predicament before, served me a generous portion of roast lamb and mushy peas; at that time I thought I had found heaven.

It didn't take long for me to finish my plate and just as I was contemplating 'seconds' and unfamiliar sound caught my ear. The sound was coming from the living room and I could see my grandmother sitting in her chair; I ventured inside to investigate. As I peered around the living room door, I could see the origin of the sound. My grandmother's old record player was producing the most beautiful music I had ever heard. Seeing my little face peeping through the doorway, my grandmother called me over and placed me gently on her lap.

"This was your grandfather's favourite song," she said, "he would sit here and listen to it for hours at a time."
I listened carefully to the words, "Oíche de bháthadh bháile, oíche de bháthadh bháile."

"What does it mean grandma?" I asked.

"It is an old song, welcoming back those who fought for our land not so long ago," her eyes glistened, "your grandfather was one of them." I began to wish that I had not asked. My grandmother had lost her husband during a war and it often made her sad. This time though, something was different, her face was content. She held me close and we sat and listened to the music; I wanted that moment to last forever.

* * *

I joined in the song of the man beside me, feebly at first, but it soon rose in volume and more voices joined the chorus. Now I knew why I was here and what I was fighting for; it seemed that every other man in that trench knew as well. We were fighting for our families; those we loved and those who had gone before us. We were fighting for the land of our ancestors and for our right to live in it long into the future. As our voices soared I saw the barriers between us shatter; it was as if all of us shared the same memory, albeit with our own families. This music triggered a spirit that raised us up and bound us as one. With each single man possessing the strength, courage and determination of many, we scaled those cold gray walls together and charged into the fray.
Response 5

When Winter Comes.

Autumn

Slowly they dribble in: suits and ties, briefcases and heels, checking their watches impatiently. Changing my briefcase to my other hand I check: 5:22. The bus is five minutes late. At least I got a seat. The sun shines warmly and my scalp prickles beneath my toupee. I give it a tentative pat, hoping to satisfy the itch without drawing attention to it. An old lady slowly hobbles toward the bus stop, fighting through the gathering crowd, aiming for the shady patch on the other side. I stand, we exchange smiles and she gratefully accepts my seat. She is worn and tired, but she looks content. There it goes again. The darn toupee! Itching. My hair will grow back soon, I hope, then it'll all be over. I guess it's what you get really. You can't live a life like I did: drugs, alcohol, cigarettes. Without expecting it to come back and bite you. Hard. I don't regret it though. I've had my time.

“For everything there is a season, and a time to every purpose under heaven.”

My time is passing.

Winter

The sun beats down on me, as I drag my protesting bones toward the crowded bus stop. I remember the days as a young girl, when I
loved the heat. Not anymore, now it tires me, everything does. A kind young man stands for me, offers a sad smile and scratches his head. I sit, and my body sinks gratuitously into the seat. Relief. I'm not scared to die. I've lived, and lived well. I am content to let the young ones take over.

“For everything there is a season, and a time to every purpose under heaven.”

My time has passed.

Seeing

On a flat patch of grass, two boys, barely even ten years old are playing soccer. There’s something mesmerising about them; how they smile so openly and truthfully. Sometimes they plod around like they have all the time in the world, others they race around excitedly, as though this is their last minute on earth and they’re keen to experience everything before it ends. I check my watch. She’s late. I’ll bet those boys can’t even tell the time. If they can I’ll bet they don’t think about it. I take off my watch and put it in my pocket, she’ll get here when she gets here. I’ve got all day. Those kids could turn out to be champions one day or soldiers, doctors, scientists... but not today.

“For everything there is a season, and a time to every purpose under heaven.”

Their time is coming.
Summer
What a glorious day! I was late, but I'm here now, that's what matters. We lie together, the cool, fresh grass soft against our backs. My head is on his chest, rising and falling with each deep breath. Looking down the hill, and out over the city we see the suits, lining up at the bus stop, continuing their endless monotony. Day in, day out: shirt, tie, jacket, briefcase, bus, desk, bus, T.V. I never want to end up like that. A man stands for an old lady. He must be in his mid-forties, I reckon. He was fit once, you can tell, but now he stands hunched and sad. If you look close enough, you can see the tears in his eyes. There's a lot to learn from them, their generation; live your life, respect our planet, use your time, or before you know it it'll all be gone. They've had their turn, it's time for a change. Our change.

"For everything there is a season,
and a time to every purpose
under heaven."

Our time is now.
# Relative worth of each subtest

## Relative worth of parts of the QCS Test

<table>
<thead>
<tr>
<th>Paper</th>
<th>Worth</th>
<th>Comment</th>
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<td>68</td>
<td>Two grades on each of the five substantive criteria plus two judgments on length</td>
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<tr>
<td>MC I 2</td>
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<td>50 items of equal worth</td>
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<td>SR 3</td>
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<td>17 items with up to five grades each</td>
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<td>MC II 4</td>
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**Total 235**

## Worth SR paper

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\[ \sum \left( \frac{A}{2} \right) = 67 \]
Deemed CCEs and QCS Test items

Tables showing CCEs tested within the MC and SR subtests are presented earlier in this document. There appears next to each item (or unit) one or more CCEs. What does this mean?

The QCS Test assesses students in terms of the common elements of the Queensland senior curriculum: analysing and synthesising, evaluating, comparing, interrelating ideas, graphing, estimating, compiling statistics, and so on. There is not, however, a simplistic match of CCEs and individual items in the QCS Test: exactly one item for each CCE or exactly one CCE for each item. By their nature, some CCEs are obviously widely present — interpreting words and symbols, analysing, interpreting the meaning of diagrams, justifying; others such as graphing may be obviously absent from all but one or two specific items.

The CCE given for an item is not, therefore, a claim that this is the only skill required to complete this item successfully. Nor is it a claim that the CCE should be understood as meaning only the skills apparently required by the item. There may even seem to be ways of completing the item successfully that do not appear to involve the given CCE/s.

The listing of CCEs against items provides information about how the test constructors view each item in the context of the particular QCS Test in which it occurs.

Balance of the QCS Test in terms of CCEs

The listing of CCEs against items may suggest that the balance of a particular QCS Test or a series of QCS Tests can be assessed by a tally of the number of times each CCE is listed.

It is wrong to expect such a tally to show an equal number of items for each of the 49 CCEs because they are not, and were not developed to be, either equal or equivalent, or in any other sense, interchangeable.

A reasonable assessment of the balance of the QCS Test will take into account that

- the 49 CCEs are not equal
- no CCE is trivial
- some CCEs are more substantial than others
- no single CCE fails to occur in the Queensland senior curriculum
- some CCEs are diffused generally across a wide range of items (and are therefore not listed frequently)
- some CCEs can only be tested through particular kinds of items which require a substantial proportion of the total test item (and hence these CCEs will not occur very often).
Appendixes

Appendix 1: The 49 Common Curriculum Elements

Descriptors and Notes

Note: The numbering system given for the testable Common Curriculum Elements is that used within the Testing Unit. Readers should not be perturbed to find that, while the list is in numerical order, there are numbers missing. All 49 elements appear in the list.

1 Recognising letters, words and other symbols

2 Finding material in an indexed collection:
   Note: Examples of an indexed collection: a dictionary, an encyclopaedia, a library catalogue, a road map, an art catalogue, an instruction booklet, a share register, a classified advertisement column.

3 Recalling/remembering:
   Note: Consult Test Specifications Section 2.3 to establish what might reasonably be regarded as assumed knowledge, i.e. “an elementary level of ‘general knowledge’, and a knowledge of vocabulary and mathematical operations at a level of sophistication consistent with a sound general Year 10 education ... basic arithmetic operations involved in calculation, also include fundamental mathematical concepts such as simple algebra, percentage, ratio, area, angle, and power of ten notation.”

4 Interpreting the meaning of words or other symbols

5 Interpreting the meaning of pictures/illustrations

6 Interpreting the meaning of tables or diagrams or maps or graphs

7 Translating from one form to another:
   Expressing information in a different form.
   Note: Translation could involve the following forms:
   verbal information (in English)
   algebraic symbols
   graphs
   mathematical material given in words
   symbolic codes (e.g. Morse code, other number systems)
   pictures
   diagrams
   maps.

9 Using correct spelling, punctuation, grammar

10 Using vocabulary appropriate to a context

11 Summarising/condensing written text:
   Presenting essential ideas and information in fewer words and in a logical sequence.
   Note: Simply listing the main points in note form is not acceptable, nor is “lifting” verbatim from the given passage.

12 Compiling lists/statistics:
   Systematically collecting and counting numerical facts or data.
13 **Recording/noting data:**
Identifying relevant information and then accurately and methodically writing it down in one or more predetermined categories.

*Note: Examples of predetermined categories are: female/male; odd/even; mass/acceleration.*

14 **Compiling results in a tabular form:**
Devising appropriate headings and presenting information using rows and/or columns.

15 **Graphing:**
*Note: Students will be required to construct graphs as well as to interpret them (see CCE 6).*

16 **Calculating with or without calculators**

17 **Estimating numerical magnitude:**
Employing a rational process (such as applying an algorithm or comparing by experience with known quantities or numbers) to arrive at a quantity or number that is sufficiently accurate to be useful for a given purpose.

18 **Approximating a numerical value:**
Employing a rational process (such as measuring or rounding) to arrive at a quantity or number that is accurate to a specified degree.

19 **Substituting in formulae**

20 **Setting out/presenting/arranging/displaying**

21 **Structuring/organising extended written text**

22 **Structuring/organising a mathematical argument:**
Generating and sequencing the steps that can lead to a required solution to a given mathematical task.

26 **Explaining to others:**
Presenting a meaning with clarity, precision, completeness, and with due regard to the order of statements in the explanation.

27 **Expounding a viewpoint:**
Presenting a clear convincing argument for a definite and detailed opinion.

28 **Empathising:**
Appreciating the views, emotions and reactions of others by identifying with the personalities or characteristics of other people in given situations.

29 **Comparing, contrasting:**
Comparing: displaying recognition of similarities and differences and recognising the significance of these similarities and differences.
Contrasting: displaying recognition of differences by deliberate juxtaposition of contrary elements.

30 **Classifying:**
Systematically distributing information/data into categories which may be either presented to, or created by, the student.
31 Interrelating ideas/themes/issues
32 Reaching a conclusion which is necessarily true provided a given set of assumptions is true:
   Deducing
33 Reaching a conclusion which is consistent with a given set of assumptions:
   Inferring
34 Inserting an intermediate between members of a series:
   Interpolating
35 Extrapolating:
   Logically extending trends or tendencies beyond the information/data given.
36 Applying strategies to trial and test ideas and procedures
37 Applying a progression of steps to achieve the required answer:
   Making use of an algorithm (which is already known by students or which is given to students) to proceed to the answer.
38 Generalising from information:
   Establishing by inference or induction the essential characteristics of known information or a result.
41 Hypothesising:
   Formulating a plausible supposition to account for known facts or observed occurrences. The supposition is often the subject of a validation process.
42 Criticising:
   Appraising logical consistency and/or rationally scrutinising for authenticity/merit.  
   Note: also critiquing — critically reviewing.
43 Analysing:
   Dissecting to ascertain and examine constituent parts and/or their relationships.
44 Synthesising:
   Assembling constituent parts into a coherent, unique and/or complex entity.
   The term “entity” includes a system, theory, communication, plan, set of operations.
45 Judging/evaluating:
   Judging: applying both procedural and deliberative operations to make a determination.
   Procedural operations are those that determine the relevance and admissibility of evidence, whilst deliberative operations involve making a decision based on the evidence.
   Evaluating: assigning merit according to criteria.
46 Creating/composing/devising
48 Justifying:
   Providing sound reasons or evidence to support a statement.
   Soundness requires that the reasoning is logical and, where appropriate, that the premises are likely to be true.
49 **Perceiving patterns:**
Recognising and identifying designs, trends and meaningful relationships within text.

50 **Visualising:**
*Note: Examples of aspects of this element that might be tested include:*
- visualising spatial concepts (e.g. rotation in space)
- visualising abstractions in concrete form (e.g. kinetic theory—the movement of molecules)
- visualising a notion of a physical appearance from a detailed verbal description.

51 **Identifying shapes in two and three dimensions**

52 **Searching and locating items/information:**
*Note: This element as it occurs in syllabuses usually refers to field work. As these conditions are plainly impossible to reproduce under QCS Test conditions, testing can only be performed at a “second order” level.*

*In the sense of looking for things in different places, “searching and locating items/information” may be taken to include quoting, i.e. repeating words given in an extract in the stimulus material.*

53 **Observing systematically:**
*Note: This element as it occurs in syllabuses usually refers to laboratory situations. As these conditions are plainly impossible to reproduce under QCS Test conditions, testing can only be performed at a “second order” level.*

55 **Gesturing:**
Identifying, describing, interpreting or responding to visual representations of a bodily or facial movement, or expression that indicates an idea, mood or emotion.

*Note: This element as it occurs in syllabuses refers to acting and other forms of movement. It is possible to test only the interpretation of movement and expression. It is understood that there are cultural variations relating to the meanings of particular gestures.*

57 **Manipulating/operating/using equipment:**
Displaying competence in choosing and using an implement (in actual or representational form) to perform a given task effectively.

60 **Sketching/drawing:**
Sketching: executing simply a drawing or painting, giving essential features but not necessarily with detail or accuracy.

Drawing: depicting an object, idea or system pictorially, such as in a clearly defined diagram, or flowchart.

*Note: Sketching/drawing does not include the representation of numerical data as required in CCE 14 and CCE 15.*
### Appendix 2: CCEs grouped by baskets

<table>
<thead>
<tr>
<th>α</th>
<th>Comprehend and collect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Recognising letters, words and other symbols.</td>
</tr>
<tr>
<td>2</td>
<td>Finding material in an indexed collection.</td>
</tr>
<tr>
<td>3</td>
<td>Recalling/remembering.</td>
</tr>
<tr>
<td>4</td>
<td>Interpreting the meaning of words or other symbols.</td>
</tr>
<tr>
<td>5</td>
<td>Interpreting the meaning of pictures/illustrations.</td>
</tr>
<tr>
<td>6</td>
<td>Interpreting the meaning of tables or diagrams or maps or graphs.</td>
</tr>
<tr>
<td>7</td>
<td>Translating from one form to another.</td>
</tr>
<tr>
<td>12</td>
<td>Compiling lists/statistics.</td>
</tr>
<tr>
<td>13</td>
<td>Recording/noting data.</td>
</tr>
<tr>
<td>28</td>
<td>Empathising.</td>
</tr>
<tr>
<td>51</td>
<td>Identifying shapes in two and three dimensions.</td>
</tr>
<tr>
<td>52</td>
<td>Searching and locating items/information.</td>
</tr>
<tr>
<td>53</td>
<td>Observing systematically.</td>
</tr>
<tr>
<td>55</td>
<td>Gesturing.</td>
</tr>
<tr>
<td>57</td>
<td>Manipulating/operating/using equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>β</th>
<th>Structure and sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Structuring/organising extended written text.</td>
</tr>
<tr>
<td>22</td>
<td>Structuring/organising a mathematical argument.</td>
</tr>
<tr>
<td>29</td>
<td>Comparing, contrasting.</td>
</tr>
<tr>
<td>30</td>
<td>Classifying.</td>
</tr>
<tr>
<td>31</td>
<td>Interrelating ideas/themes/issues.</td>
</tr>
<tr>
<td>36</td>
<td>Applying strategies to trial and test ideas and procedures.</td>
</tr>
<tr>
<td>38</td>
<td>Generalising from information.</td>
</tr>
<tr>
<td>49</td>
<td>Perceiving patterns.</td>
</tr>
<tr>
<td>50</td>
<td>Visualising.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>θ</th>
<th>Analyse, assess and conclude</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Reaching a conclusion which is necessarily true provided a given set of assumptions is true.</td>
</tr>
<tr>
<td>33</td>
<td>Reaching a conclusion which is consistent with a given set of assumptions.</td>
</tr>
<tr>
<td>34</td>
<td>Inserting an intermediate between members of a series.</td>
</tr>
<tr>
<td>35</td>
<td>Extrapolating.</td>
</tr>
<tr>
<td>41</td>
<td>Hypothesising.</td>
</tr>
<tr>
<td>42</td>
<td>Criticising.</td>
</tr>
<tr>
<td>43</td>
<td>Analysing.</td>
</tr>
<tr>
<td>44</td>
<td>Synthesising.</td>
</tr>
<tr>
<td>45</td>
<td>Judging/evaluating.</td>
</tr>
<tr>
<td>48</td>
<td>Justifying.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>π</th>
<th>Create and present</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Using correct spelling, punctuation, grammar.</td>
</tr>
<tr>
<td>10</td>
<td>Using vocabulary appropriate to a context.</td>
</tr>
<tr>
<td>11</td>
<td>Summarising/condensing written text.</td>
</tr>
<tr>
<td>14</td>
<td>Compiling results in a tabular form.</td>
</tr>
<tr>
<td>15</td>
<td>Graphing.</td>
</tr>
<tr>
<td>20</td>
<td>Setting out/presenting/arranging/displaying.</td>
</tr>
<tr>
<td>26</td>
<td>Explaining to others.</td>
</tr>
<tr>
<td>27</td>
<td>Expounding a viewpoint.</td>
</tr>
<tr>
<td>46</td>
<td>Creating/composing/devising.</td>
</tr>
<tr>
<td>60</td>
<td>Sketching/drawing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>φ</th>
<th>Apply techniques and procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Calculating with or without calculators.</td>
</tr>
<tr>
<td>17</td>
<td>Estimating numerical magnitude.</td>
</tr>
<tr>
<td>18</td>
<td>Approximating a numerical value.</td>
</tr>
<tr>
<td>19</td>
<td>Substituting in formulae.</td>
</tr>
<tr>
<td>37</td>
<td>Applying a progression of steps to achieve the required answer.</td>
</tr>
</tbody>
</table>
Appendix 3: Glossary of terms used in relation to the QCS Test

acceptable minimum standards: the description of a marking process whereby markers are required to use their assessment skills to interpret a student response and match it to a standard in each performance domain being tested by the item. Predetermined trade-offs are already incorporated. Markers then award a grade for that performance domain for that item.

adjacent grades: on a short response marking scheme, a pair of available grades in direct proximity, e.g. A and B, D and E, N and O (see grade).

assumed knowledge: the benchmark of students’ required learning in terms of QCS testing; taken to be the possession of both an elementary level of general knowledge and a knowledge of vocabulary and mathematical operations at a level of sophistication consistent with that of a student with a sound general Year 10 education.

batched items: a group of items which relate to the same stimulus material.

built-in trade-off: a property of a marking scheme that ensures that the performance domains contribute to the grade in a manner reflective of their hierarchical position in that item.

calibration: a routine process aimed at controlling reliability loss by removing irregularities in a marker’s judgment “gauge” before that marker is free to “gauge standards”, i.e. to mark.

check marking: a process involving scrutiny by marking supervisors (WT), immersers (SR) and unit managers (SR) of grades awarded by markers.

closed response item: a short response item which involves the student in the production of an answer and requires the marker to assess the accuracy of the response. This type of item usually produces a definite number of response types.

common curriculum element (CCE): one of the 49 generic skills that are common to at least two subjects in the Queensland senior curriculum, testable in the current format of the QCS Test, and within the learning opportunities of a high proportion of students.

creditable response: a response (to a short response item) which is awarded one of the available grades, A to E, and which thus attracts credit.

criterion (also called basket): macroskill. The QCS Test measures achievement in five criteria, each of which is symbolised by a letter of the Greek alphabet:

α comprehend and collect
β structure and sequence
θ analyse, assess and conclude
π create and present
ϕ apply techniques and procedures.

The 49 common curriculum elements can be distributed amongst these five criteria, each criterion representing a set of related CCEs.

cue: an instruction attached to a short response item, situated next to the space provided for the student response. The cue gives students a clear idea of what is required of them, sometimes providing essential further information on how to respond.

curriculum element: identifiable coherent activity specified by a syllabus as relevant to the pursuit of the aims and objectives of that syllabus.

denotation: descriptor and/or notes related to a CCE, which represent the meaning of that CCE for the purpose of the QCS Test. Denotations are circulated to the appropriate audiences.

descriptor: see standard descriptor.

desirable feature: item-specific characteristic of a student’s short response that demonstrates achievement and therefore contributes to the determination of attainment in a particular performance domain.
**dimension**: one of nine defined characteristics of a test item. Each item can be classified in terms of each of these nine dimensions. This classification is used for assessing range and balance in the test.

**discrepant marker**: a marker whose marking differences (compared with other markers) are either not acceptably small or not apparently random

**dissonant markings**: binders whose items have been given significantly different marks by different markers

**essential equipment**: “tools of the trade” listed in the Student Information Bulletin and in Directions on the cover of the testpaper, and which the student must provide in order to complete the test, namely:
- pens (black ink)
- pencil (for drawing, sketching, etc. but not for writing)
- protractor
- drawing compass
- eraser
- coloured pencils
- ruler
- calculator with spare batteries.

**exemplar**: example of a response included in the marking scheme as an indication to markers of the acceptable standard for the award of an A-grade

**flyer**: a written mechanism by which unit managers and immersers can communicate to markers any decisions regarding the treatment of scripts made after marking has commenced

**footnote**: additional information provided at the end of the relevant piece of stimulus material, with reference to the stimulus material via a superscript. It may take the form of a commentary on word usage, sourcing of an extract, etc.

**gloss**: definition of a term that students are not expected to know. When substantive vocabulary of a high level of sophistication whose meaning cannot be determined from the context is used, a meaning or explanation is provided at the end of the relevant passage. Reference to the passage is made via a superscript.

**grade (response grade)**: a measure of performance on a short response item on the basis of a student’s response. Grades are consecutive letters, with A denoting the grade pertaining to the highest performance level. The number of grades may vary from item to item. The lowest available grade identifies the threshold for creditable performance.

**hierarchy**: a ranking of the performance domains of an item, indicating their relative contributions to the award of the grades

**immerser (SR)**: immersers train markers to apply the prescribed marking schemes and standards for each item; conduct check marking and refocusing sessions as determined by quality control; support markers with advice on marking; maintain the standards of the marking

**immersion**: instruction to acquaint markers with details and subtleties of the marking schemes for the items in an allocated unit; discussion of common response types and marking of real student responses

**immersion notes**: unit-specific script prepared by immersers for use in training markers

**immersion session**: a set period of time when immersers train markers in the marking scheme and provide them with guided assistance in practice marking. Verbal instructions which form part of the marking prescription may be given at this time.

**incline of difficulty**: the sequencing of units within a testpaper in such a way that units tend to become progressively more difficult towards the end of the testpaper

**introduction**: a block of text at the beginning of a unit that, when necessary, gives a reference for the stimulus material and items to follow

**item**: comprises the stem, cue and response area
**item-specific:** pertaining to a particular item; usually, item-specific documents contain information which can only pertain to one of the items on a particular subtest

**item writer:** a person who writes and develops items for inclusion in the itembank. Test specifications are heeded in the writing of items.

**key term:** one of a list of verbs used in the stems of short response items as commands or task setters, and for which clear definitions are appropriately circulated to students and markers for the purposes of the QCS Test. The key terms include the following:

- account for
- approximate
- argue
- comment on
- compare
- contrast
- derive
- describe
- determine
- discuss
- draw (cf. sketch)
- estimate
- evaluate
- explain
- expound
- express
- extrapolate
- find
- generalise
- identify
- illustrate/exemplify
- indicate
- justify
- list
- outline (in words)
- present
- prove
- rank
- refer
- show (calculations)
- sketch (cf. draw)
- state
- substitute in
- suggest
- summarise
- transcribe
- verify
- quote

**line numbers:** numbers situated in the left-hand margin of some passages of stimulus material to help students locate details mentioned in associated items

**marker training:** a process which occurs during the days immediately preceding the marking proper, and consists of a pretraining/administration session, immersion session in an allocated marking unit, together with preliminary marking and feedback sessions

**marking history:** a collection of marking schemes for all items in the unit in which a marker is trained to mark, together with the marker manual. Running rules and flyers are sometimes added to the folio during the course of the marking operation.

**marking grid:** an item-specific sheet, accompanying the marking scheme, designed to assist markers’ decision making when the application of descriptors is particularly complex. The use of such grids may be either compulsory or non-compulsory.

**marking pool:** the total group of markers selected from the register of markers to be involved in the marking operation for a given year

**marking scheme:** the item-specific criteria and standards schema from which markers can determine grades; the marking scheme may not include all of the instructions to the markers. Most marking schemes are presented as a table in which the cells of each column give the descriptors of standards for the grade shown in that column’s heading.

**marking supervisor (WT):** marking supervisors train markers to apply the prescribed criteria and standards; conduct check marking and refocusing sessions as determined by quality control; support markers with advice on marking; maintain the standards of marking.

**marking unit:** a collection of items that is to be marked using a single marksheet. An individual marking unit may include items from more than one test unit. The items of an individual test unit may be spread over more than one marking unit.

**marksheet:** a pre-printed sheet markers use to record information about marking.

**mathematical operations:** at the level of QCS testing, the basic operations involved in calculation (addition, subtraction, multiplication, division), as well as fundamental mathematical concepts such as simple algebra, percentage, ratio, area, angle, and power of ten notation

**miniature SR paper:** an A3 sheet containing abbreviated versions of the items in the testbook. Students may retain this at the conclusion of the test.
model response: an example of a response that demonstrates the highest level of performance and which would invariably be awarded the highest grade

monitoring (marker monitoring): comparison of markers (many pairings) to identify responses to be re-marked, markers who require refocusing, and aspects of marking schemes which need attention during calibration

non-contributory: term applied to the grade given to a short response item when a response is unintelligible or does not satisfy the requirements for any other grade (N), or when the item is omitted (O)

notes: a note on a marking scheme that: clarifies features of the item; defines, qualifies or explains terms used in the descriptors; gives additional information about the treatment of particular types of response

omit: label given to that category of response to a test item where the student fails to provide a response; that is, the student makes no apparent attempt to respond to the task set and leaves the response space completely blank

open-ended response item: a short response item which involves the student in generative thinking and requires the marker to assess the quality of the response. No exhaustive list of desirable features can be identified a priori to describe a given response type.

optional equipment: “tools of the trade” (other than essential equipment) normally used in a course of study, which students may choose to provide for the test, e.g.

- set square
- correction fluid
- sharpener.

pathological response: one of the 2% or less of different or unpredictable responses not covered directly by the descriptors in the marking scheme, and discovered after marking commences

performance domain(s): common curriculum element(s) tested by a particular item. For items which are associated with more than one CCE, the influence of each CCE is clearly evident in the marking scheme.

practice effect: an increase in marking speed as the marker gains experience in reading student responses and grading them with the marking scheme

practice set: booklet of authentic student responses given to markers within an immersion session to reinforce learning

preliminary marking: mandatory initial session of actual marking conducted under normal conditions with grades to stand. Preliminary marking usually occurs immediately after immersion and before the feedback session.

primary marking: the totality of the first two independent markings of all items on the testpaper

The number of marker judgments in the primary marking is \(2N \sum_{i=1}^{p_i} \), where \(N\) = number of students, \(n\) = number of items on the testpaper, and \(p_i\) = number of performance domains for the \(i\)th item.

refocusing: a one-on-one counselling session between an immerser and a marker who is experiencing problems with his/her marking, as identified by quality-control procedures

referee marking: an independent third marking of a student response which occurs when two independent markers disagree to an extent which is regarded as significant for that item

registered marker: a marker who has successfully completed a recruitment session

reliability: the degree to which measurements are consistent, dependable or repeatable; that is, the degree to which they are free of errors

reliability of grades: the degree to which there is marker agreement as to the grade awarded (although some grades are truly borderline)

response: the student’s work on an item as communicated to the marker. In writing, drawing, calculating and so on in the case of a short response item. By blackening a circle corresponding to the selected response option in the case of a multiple choice item.
response alternative: one of four options from which students choose the best response for a multiple choice item. Students record their responses on a mark-sensitive sheet which is computer scanned for scoring.

response area: the space provided in the short response testbook where students give their response. It may be a ruled area or grid, a designated space in which to write, draw, complete a diagram, fill in a table, etc.

richness: a property of a test item whereby the item can provide more than the usual single piece of information about student achievement. In the case of a rich short response item, markers are required to award a grade in more than one, usually two, performance domains.

running rules: decisions made by unit managers and immersers after the marking has commenced to supplement the application of marking schemes

sample response: authentic student response used for the purposes of training

second guessing: anticipating the grade selected by other markers by considering “What will other markers do?” rather than by applying the marking scheme

standard: a reference point for describing the quality of student responses in performance domains (see marking scheme)

standard descriptor: a statement or list of statements that succinctly conveys the standard or features required in a response to be awarded that grade in a particular performance domain

star-value: a rating for a short response item relative to other items on the short response paper, in terms of worth/effort, from [•] lowest to [*****] highest. The star-value is printed beside the item number.

stem: that part of the item which indicates the task set or the question to be answered

stimulus material: verbal, numerical, pictorial, tabular, or graphical material that sets the context for the item(s) to follow with the aim of promoting students’ responses

testbook (testpaper): the booklet provided to a student for the SR subtest; the cover carries directions to students; the booklet contains items arranged within units. The booklet also contains spare pages (in case the student needs extra response space, or decides to rewrite a response after cancelling the initial attempt) and a fold-out section inside the back cover containing the item and star-value distribution.

training: see marker training

unit: a part of a test consisting of stimulus material and associated items and, often, an introduction

unit manager (SR): a person who trains the immersers of a particular unit so that they can train the markers with due regard to the construct of the test. Unit managers direct, assist and monitor the performance of immersers; provide clarification of marking schemes when required; assist with check marking, referee marking and other quality-control procedures.

validity: the extent to which an assessment instrument measures what it is claimed to measure

validity of grades: the extent to which the item and marking scheme measure achievement in the designated CCE(s)

verbal instructions: information given to markers by immersers to acquaint them with the details and subtleties of marking schemes, and with common response types gleaned from a sample of student responses