

Retrospective

2019 Queensland Core Skills Test

Multiple Choice (MC) I & II (Part 1 of 5)

Multiple Choice (MC) I & II

The 2019 MC subtest consisted of two testpapers, each with 25 verbal and 25 quantitative items. For an item, the facility (F) is the proportion of students who gave the correct response; it is expressed as a percentage. For the 2019 MC subtest, the average facility (AF) was 54.3 %. The average facility on verbal items was 53.2 %, and on quantitative items was 55.5 %. The average facility for MC I was 53.2 % and for MC II was 55.5 %. On MC I, facilities for items ranged from 25 % (item 49) to 81 % (items 1 and 33), and on MC II from 23 % (item 94) to 83 % (item 52).

Within the verbal domain, stimulus materials included extracts from novels, poems, quotations and diagrams. Within the quantitative domain, stimulus materials included diagrams, illustrations, tables, graphs and formulas. Epistemic areas covered included English language and literature, biography, politics, biology, sport, visual arts, history, demography, genealogy, commerce, music, architecture, geography, and pure and applied mathematics.

The following table summarises data about the 23 units that made up the 2019 MC subtest. The main Common Curriculum Elements (CCEs) tested in each unit are listed. The order of the CCEs for each unit does not reflect the order of the items, nor does it imply a cognitive hierarchy. The baskets into which CCEs are grouped are shown in Appendix 3.

MC I & II 2019 summary

Unit	Item	Key	Basket	F	AF (%)	Common Curriculum Elements
1 Outrage	1	D	α	81	81	5 <i>Interpreting the meaning of pictures/illustrations</i>
2 PO boxes	2	B	β	37	60.8	7 <i>Translating from one form to another</i> 43 <i>Analysing</i> 49 <i>Perceiving patterns</i> 50 <i>Visualising</i> 51 <i>Identifying shapes in two and three dimensions</i>
	3	C	α	77		
	4	A	α	62		
	5	C	β	70		
	6	B	θ	58		
3 Ukulele	7	C	α	44	52.6	28 <i>Empathising</i> 29 <i>Comparing, contrasting</i> 31 <i>Interrelating ideas/themes/issues</i> 43 <i>Analysing</i>
	8	A	θ	57		
	9	A	β	48		
	10	C	β	54		
	11	C	β	60		
4 Beep test	12	A	ϕ	73	56.6	6 <i>Interpreting the meaning of tables ...</i> 19 <i>Substituting in formulae</i> 37 <i>Applying a progression of steps to achieve the required answer</i>
	13	C	α	56		
	14	D	α	49		
	15	D	ϕ	40		
	16	C	ϕ	65		
5 Truth	17	B	θ	73	61.0	26 <i>Explaining to others</i> 29 <i>Comparing, contrasting</i> 43 <i>Analysing</i>
	18	C	π	58		
	19	D	β	52		
6 Air train	20	B	ϕ	70	55.3	16 <i>Calculating with or without calculators</i> 19 <i>Substituting in formulae</i>
	21	A	ϕ	48		
	22	C	ϕ	48		
7 Science	23	D	α	54	51.4	28 <i>Empathising</i> 31 <i>Interrelating ideas/themes/issues</i> 33 <i>Inferring</i> 43 <i>Analysing</i>
	24	A	θ	44		
	25	A	θ	38		
	26	A	θ	52		
	27	D	β	58		
	28	C	α	57		
	29	B	θ	57		
8 Card game	30	B	θ	56	44.0	29 <i>Comparing, contrasting</i> 31 <i>Interrelating ideas/themes/issues</i> 33 <i>Inferring</i>
	31	D	β	39		
	32	B	β	37		
9 Pounds	33	D	α	81	57.3	7 <i>Translating from one form to another</i> 16 <i>Calculating with or without calculators</i> 37 <i>Applying a progression of steps to achieve the required answer</i>
	34	C	ϕ	52		
	35	B	ϕ	50		
	36	B	ϕ	58		
	37	B	ϕ	56		
	38	D	ϕ	47		

Unit	Item	Key	Basket	F	AF (%)	Common Curriculum Elements
10 Saunders	39	D	θ	36	45.0	29 <i>Comparing, contrasting</i> 32 <i>Deducing</i> 33 <i>Inferring</i> 43 <i>Analysing</i> 45 <i>Judging/evaluating</i> 48 <i>Justifying</i>
	40	A	θ	45		
	41	C	θ	46		
	42	A	θ	49		
	43	A	θ	41		
	44	A	β	53		
11 Air race	45	D	ϕ	59	45.5	15 <i>Graphing</i> 16 <i>Calculating with or without calculators</i> 19 <i>Substituting in formulae</i> 36 <i>Applying strategies to trial and test ideas and procedures</i> 37 <i>Applying a progression of steps to achieve the required answer</i>
	46	B	ϕ	53		
	47	B	ϕ	62		
	48	B	π	33		
	49	A	ϕ	25		
	50	C	β	41		
12 Pavlov	51	D	β	75	75.0	29 <i>Comparing, contrasting</i>
13 Ethanol	52	B	ϕ	83	74.3	16 <i>Calculating with or without calculators</i>
	53	C	ϕ	72		
	54	A	ϕ	68		
14 Friendship	55	C	θ	66	63.2	10 <i>Using vocabulary appropriate to a context</i> 29 <i>Comparing, contrasting</i> 33 <i>Inferring</i> 43 <i>Analysing</i> 45 <i>Judging/evaluating</i>
	56	D	θ	69		
	57	A	π	74		
	58	B	θ	64		
	59	A	β	43		
15 Tennis competition	60	A	α	72	60.0	6 <i>Interpreting the meaning of tables ...</i> 32 <i>Deducing</i> 37 <i>Applying a progression of steps to achieve the required answer</i> 43 <i>Analysing</i>
	61	B	α	70		
	62	B	θ	75		
	63	B	ϕ	49		
	64	C	θ	45		
	65	C	ϕ	49		
16 Purity	66	D	θ	82	64.7	28 <i>Empathising</i> 33 <i>Inferring</i> 38 <i>Generalising from information</i>
	67	B	α	59		
	68	C	θ	53		
17 Coin composition	69	A	ϕ	56	56.0	37 <i>Applying a progression of steps to achieve the required answer</i>
18 Advice	70	A	θ	38	56.1	31 <i>Interrelating ideas/themes/issues</i> 33 <i>Inferring</i> 43 <i>Analysing</i>
	71	D	θ	73		
	72	C	θ	60		
	73	D	β	62		
	74	A	θ	70		
	75	A	β	29		
	76	B	θ	61		

Unit	Item	Key	Basket	F	AF (%)	Common Curriculum Elements
19 Heard Island	77	D	α	64	43.8	6 <i>Interpreting the meaning of ... graphs</i> 7 <i>Translating from one form to another</i> 17 <i>Estimating numerical magnitude</i>
	78	A	α	46		
	79	A	ϕ	29		
	80	B	α	36		
20 Isobel	81	D	π	45	44.2	10 <i>Using vocabulary appropriate to a context</i> 28 <i>Empathising</i> 30 <i>Classifying</i> 33 <i>Inferring</i>
	82	C	θ	61		
	83	C	β	34		
	84	D	θ	46		
	85	A	α	35		
21 Celestial debris	86	B	α	70	49.3	6 <i>Interpreting the meaning of ... graphs</i> 7 <i>Translating from one form to another</i> 16 <i>Calculating with or without calculators</i> 35 <i>Extrapolating</i>
	87	D	α	30		
	88	D	α	57		
	89	C	ϕ	51		
	90	B	ϕ	42		
	91	D	θ	46		
22 Babbitt	92	B	α	45	42.8	4 <i>Interpreting the meaning of words ...</i> 10 <i>Using vocabulary appropriate to a context</i> 38 <i>Generalising from information</i> 43 <i>Analysing</i>
	93	C	π	60		
	94	B	θ	23		
	95	A	β	43		
23 SET	96	B	ϕ	58	58.6	30 <i>Classifying</i> 32 <i>Deducing</i> 43 <i>Analysing</i> 51 <i>Identifying shapes in two and three dimensions</i>
	97	D	θ	70		
	98	A	θ	44		
	99	C	β	63		
	100	C	θ	58		
Average facility on subtest					54.3	

MC I commentary

This section gives a brief outline of each unit. Units 2 and 3 are singled out for detailed analysis.

Unit 1 *Outrage*

The cartoon in this unit makes a social comment about public protests.

Unit 2 *PO boxes*

This unit is based on the layout of Post Office boxes in the wall of a Post Office. In the stimulus, students are told and shown via a diagram that there are three different sizes of PO boxes. The important relationships are that the heights of all boxes are the same regardless of size and three small boxes and two medium boxes each cover the same area as one large box. The items investigate various configurations of the boxes in a wall and also rental propositions based on three levels of leasing costs.

Item 2

In this item students were required to find the percentage of the wall covered by the small and medium boxes. In the wall there are 36 small boxes and 20 medium boxes (these take up the same area as 30 small boxes (20×1.5)) plus 8 large boxes, which are equivalent to 24 small boxes (8×3). The total number of 'small' boxes is 90, therefore the fraction of the wall covered by small and medium boxes is $66/90$ and the percentage is closest to 73. Option B is the key. Option A results if the percentage is incorrectly calculated by multiplying by 90 and dividing by 100. Option C results if it is incorrectly assumed that one medium box is equivalent in area to two small boxes. Option D results if the percentage is calculated using a count of how many boxes there are of each size instead of comparing areas.

Item 3

In this item students were required to determine the number of boxes in the middle two rows if the boxes in those rows were all medium size. There are 12 small, 8 medium and 2 large boxes in the middle two rows. This is equivalent in area to $(12/1.5) + 8 + (2 \times 2) = 20$ medium boxes, thus option C is the key. Option A results if only one row of boxes is considered. Option B results if an incorrect count of small boxes is made. Option D results if the equivalent small box total is determined instead of the medium box total.

Item 4

This item uses a proposed layout of boxes on a different wall. No image is supplied. Given the new wall area students were required to determine how many large boxes would be in a new layout if half of the wall is covered by large boxes. Students could convert the new wall area to a number of large boxes (50) and then find half of this amount, i.e. 25 thus making option A the key. Students could also have converted the new wall area to a number of small boxes, found half and changed to large boxes by dividing by three. Option B results if the number of large boxes in the new layout is not divided by two for half the area. Option C results if the total number of boxes in the new layout is divided by two. Option D results if, when working with the number of small boxes, that number is not converted to large boxes by dividing by three.

Item 5

In this item it was required that the ratio (small:medium:large) of the numbers of each box size be found if the area covered by each size of box is equal. Using large box area as the standard, it is known that 3 small boxes are equivalent to a large box and 2 medium boxes are equivalent to a large box, hence option C (3:2:1) is the key. Option A results if it is incorrectly assumed that the ratio of the number of boxes is the same as the area ratio. Option B results if the ratio is written in inverse order. Option D results if it is incorrectly assumed that two small areas are equivalent to one medium area.

Item 6

In this item the annual leasing fee for each of the different sized boxes was given. A charge of 25c is paid every time a delivered parcel does not fit in the box and a notice informing the box owner is placed in their box. The item required students to find the minimum number of such notices per week that a person leasing

a small box could receive before it became cheaper to lease the next size box. The annual difference in leasing a small or a medium box is \$62, or approximately \$1.19 per week. The number of notices is $1.19/0.25 = 4.77$, thus option B is the key. Option A results if the \$1.19 is incorrectly taken as the final answer. Option C results if the difference between the large and medium box leases is used instead of between the small and medium. Option D results if the leasing cost of the medium box is used instead of a difference.

Unit 3 Ukulele

In this unit students were required to read and interpret an extract from a speech by the Australian writer, Helen Garner. The extract explored the impact that playing the ukulele has had on her attitude toward music.

Item 7

This item required students to discern the effect that ukulele playing had on Garner's attitude toward music. Option C is the key. Garner implies that her reverence for great music had inhibited her willingness to play music herself. The ukulele released her from this inhibition without reducing her respect for great music. Option A is not correct because Garner says nothing about her reverence for the players of great music increasing. There has been no change in her respect for great music or its exponents. Option B is not correct for a similar reason. Garner still respects great music and there is no indication that it has been diminished by her ukulele playing. Garner does refer to false ideas about music, but she strongly maintains her previous views about the greatness of great music. For this reason, option D is incorrect.

Item 8

This item required students to analyse a portion of Garner's text to understand its main point. As her main point is summarised in option A, this is the key. The quality of professionally produced music has caused people to think that self-played music is unworthy. Option B relies on a mistaken reading of 'what we've lost in our lifetime' as if it referred to the musical recording of earlier generations rather than to the practice of playing music for ourselves. Option C wrongly suggests that Garner is opposed to listening to recorded music because it is the easy option compared to playing it oneself. In fact she places a high value on recorded music and affirms her continued enjoyment of it. Option D states that the abundance of recorded music has diminished its value. Rather, Garner's point is that recorded music's high standard frightens people away from making their own music.

Item 9

This item required students to relate Garner's analogy regarding novelists writing PhDs in literary theory to attitudes towards music. Option A is the key. Garner feels people are pressured to see music as some huge problem to be solved rather than an experience to be enjoyed. Option B is incorrect because it makes a virtue out of the theoretical abstraction of music rather than seeing it as the travesty that Garner regards it to be. Option C misrepresents Garner's PhD analogy as merely referring to the commendable pursuit of a musical education. Option D is incorrect because it suggests the PhD analogy is intended to bring balance to one's musical appreciation rather than seeing it as the source of imbalance in our thinking about music.

Item 10

This item required students to select the quotation that most closely expresses Garner's view of singing. Option C is the key because it expresses the idea that we don't need to be the best of singers in order to participate. A joyful noise is better than silence. Option A implies that singing is a foolish act, whereas Garner sees that it may even approach the sacred — a practice that is meaningful and sensible. Option B is simply a description of one person's voice. Garner doesn't care what a voice might sound like but only that it be used to fulfil our deep need to sing. Option D relates singing to the professional musicians who play for us. It does not relate to Garner's point about our own participation in song.

Item 11

This item presents four analogies and required students to determine which is most analogous to Garner's change in musical appreciation. Option C is the key. There, one who appreciates the craftsmanship exhibited in the making of fine china starts to make clay pots. Similarly, Garner loves the skill of classically trained

musicians and she begins to make her own music on the ukulele. Option A is not analogous because it involves two different qualities of food but they are both made by others, not the eater. Options B and D are not analogous because in each case a person who has a very high level of skill starts to do a job that requires an arguably lesser level of skill.

Unit 4 *Beep test*

This unit is based on a fitness test known as the beep test. In this unit students were required to interrogate a partially completed table containing data regarding targets set by a version of the beep test.

Unit 5 *Truth*

This unit is based on several quotations and statements about truth and lies.

Unit 6 *Air train*

This unit is based on the volume of air displaced by a London Underground train as it goes through a tunnel. A formula to estimate the amount of air is given in the stimulus.

Unit 7 *Science*

This unit is based on an extract from a novel set in the future. Happiness and science and the role they should play in society is 'explained' in the extract.

Unit 8 *Card game*

The items in this unit are based on a poem, *Card Game*, written by AD Hope towards the end of his life.

Unit 9 *Pounds*

The items in this unit are based on the currency used in Australia before the introduction of decimal currency in 1966. Students were required to do calculations using the relationship between pounds, shillings and pence given in the stimulus.

Unit 10 *Saunders*

This unit is based on an extract from a novel set in the late 19th century. The extract contains a conversation between an English doctor and the captain of the sailing ship they are both travelling on.

Unit 11 *Air race*

In this unit students were required to work with different formulas, and interrogate data in both tabular and graphical forms, in the context of an air race described to them in the stimulus.

MC II commentary

This section gives a brief outline of each unit. Units 15 and 20 are singled out for detailed analysis.

Unit 12 *Pavlov*

The cartoon in this unit illustrates two types of conditioning. The stimulus also gives information about the experiments Pavlov ran with dogs and food. The item required students to come to a conclusion regarding Pavlov's dog and operant conditioning.

Unit 13 *Ethanol*

This unit required students to understand the various ways the amount of ethanol in a liquid can be measured and apply their understanding to specific scenarios.

Unit 14 *Friendship*

The items in this unit are based on an extract from a magazine article discussing friendship in the age of social media.

Unit 15 *Tennis competition*

A fixture card for the first five rounds in a regional tennis competition formed the basis for this unit. The matches played between six teams appear on the card. The text briefly explains the concept of 'home' and 'away' matches. Matches are played at the courts of the first-named towns except for Celigon and Frohling. The teams from these towns have their home matches at the courts of Garside and Navarre respectively as their courts were not of competition standard.

Item 60

Students were required to determine which town's competition-standard courts would not be in use in Round 2. The matches (and venues) were Celigon vs East Navarre (at Garside), Frohling vs Garside (at Navarre) and Leopold vs Navarre (at Leopold). Option A is the key as East Navarre was drawn to play an away match in Round 2 against Celigon and so their courts would not be used. Option C is incorrect as Celigon uses Garside as their home courts. Similarly option B is incorrect as Frohling uses Navarre as their home courts. Option D could be eliminated as Frohling does not have competition-standard courts.

Item 61

Students were required to determine which team would wait longest to play a finalist from the previous season. A technique to use with this item involves scanning each team's opponents to find the round in which it first played either Frohling or Garside (last season's finalists). The fixture card shows that Celigon plays Frohling in Round 1, Navarre plays Garside in Round 4, Leopold plays Garside in Round 1 and East Navarre plays Garside in Round 3. Option B is the key.

Item 62

This item required students to first determine the round in which Navarre plays its second 'home' game. This is Round 5. By a process of elimination, East Navarre was at home that round so option A is incorrect. Frohling (Navarre's opponent) was playing away for the second time thus making option B the key. Option C is incorrect as Frohling was playing for the fourth time on the Navarre courts — its three home matches in Rounds 1, 2 and 4 were at Navarre. Option D is incorrect as Garside (the club that Navarre played the previous week) was playing an away match in Round 5.

Item 63

Additional information is given for the remaining items. After the mid-season break, the draw is replayed but with the teams listed for 'home' games playing 'away' and *vice versa*. A count of the Rounds 1 to 5 matches shows that Leopold played away twice — in Rounds 1 and 5 — so its fourth away match will be its match against Frohling in Round 8. Since Frohling plays its home matches at the Navarre courts, option B is the key.

Item 64

In this item students were required to find how many consecutive matches Navarre would play on its own courts after the match against Garside, which was to be played in Round 4. Navarre's opponents in Rounds 5, 6 and 7 are Frohling, East Navarre and Leopold, all home games taking into account that the mid-season break occurs between Rounds 5 and 6. In Round 8, Celigon has a home match against Navarre, which will be played at Garside. Option C is the key with three consecutive matches.

Item 65

This item required students to use their knowledge of the number of days in November (30) and December (31) and to count the weeks from Round 1 (Saturday 14 November) to when Round 6 will begin after a three week break. Rounds 2 and 3 are scheduled for 21 and 28 November with Rounds 4 and 5 on 5 and 12 December. The next three Saturdays, 19 and 26 December and 2 January are the mid-season break. The following Saturday 9 January will be when the competition resumes. Option C is the key.

Unit 16 *Purity*

The items in this unit refer to the cartoon provided in the stimulus, which is based on the concept of fields of study arranged by 'purity'.

Unit 17 *Coin composition*

The item in this unit required students to deduce which of the statements about the composition of shillings in 1910 and in 1946 is true. The stimulus provided the weight of a shilling and also the composition of a shilling in the different years specified.

Unit 18 *Advice*

The poem in this unit gives advice to writers of fiction. Students were required to analyse the various recommendations the narrator in the poem makes about how best to write fiction.

Unit 19 *Heard Island*

This unit was based on the contour map of Heard Island provided in the stimulus. In this unit students were required to use their knowledge of scale, contours and graphs.

Unit 20 *Isobel*

This unit is based on an extract from a novel. The extract tells of a young woman's introduction to a group of students who are of a similar age to her. She takes part in a word game that they are playing.

Item 81

This item required students to infer what Kenneth means when he suggests that Janet is a coordinating conjunction. Option D is the key as to coordinate is to bring things into a proper relation, and a conjunction is a joining together of events, circumstances or people. So, Kenneth implies that Janet is the facilitator in the group. Option A is incorrect as it says that Janet is honest. There might be other reasons for thinking this is so, but it is not what is implied by the 'coordinating conjunction'. Option B is incorrect as it refers to Janet's communication style, but the term 'coordinating conjunction' implies nothing about the subtlety or directness of her communication. Option C is incorrect as it implies that Janet is one of those who are being coordinated by others.

Item 82

The extract states that when Kenneth called Vinnie an adjective, he was complimenting her. This item required students to assess Vinnie's reception of this compliment. Option C is the key. Vinnie was not sure (she had to test the compliment) that Kenneth was being sincere. Options A, B and D are incorrect because they give no sense of putting something to a test. Option A mistakenly draws on the idea of a coin as a thing of monetary value and suggests that Vinnie wanted cash rather than mere words. Option B suggests that the

coin reference indicates that Vinnie valued the compliment just as a coin is a thing of value. This is a misreading. Option D wrongly suggests that Vinnie is indifferent to Kenneth's compliment. Rather, she is said to be putting the compliment to some sort of test. This implies engagement of some sort, not indifference.

Item 83

This item asks about Trevor's self concept, based on the part of speech that he would have chosen to describe himself. He says that he thought himself a verb (perhaps a verb in the passive voice) or an abstract noun. Trevor's initial choice of 'verb' suggests that he believes himself to be effective in subtle rather than overt ways, and his alternative choice of an abstract noun suggests someone who appreciates ideas and speculation. This points to option C as the key. Option A is ruled out because both parts of speech imply activities that are means to an end; neither necessarily point to ineffectiveness or lack of direction. Option B is not the best answer because it suggests a more forceful taking of the initiative than terms like 'passive voice' and 'abstract noun' would indicate. Option D is a misreading. If Trevor is following, he is not following a crowd but merely Kenneth. Arguably Trevor does not even follow Kenneth. He counters Kenneth's suggestion, he amends his suggestion and he finally mildly objects to Kenneth's presumption in ascribing a part of speech to him.

Item 84

This item asks how Trevor reacted to Kenneth's attempt to categorise him as a noun. The key is option D. Trevor does not think he cares to be dissected and probed by Kenneth and to have Kenneth make public statements about what he thinks he has found. Trevor's reaction shows that option A is a mistaken view. Trevor does care. Option B is not the best answer because the words 'resents' and 'misrepresent' are too strong in terms of Trevor's good natured and mild responses. Option C is not correct because there is no indication that Trevor regards Kenneth's description of him as a compliment, backhanded or otherwise.

Item 85

Kenneth asks Isobel what kind of preposition she thinks she is. The item requires students to discern his motive for asking this. The key is option A. Kenneth started the game and had intended to control the outcome by ascribing parts of speech to Janet, Vinnie and Trevor. Isobel gave herself a part of speech and took the spotlight from Kenneth. Both Janet and Trevor responded approvingly to her choice and commentary on it. Kenneth's sharp and challenging questioning was his effort to retake centre stage. The tone of option B is out of sync with an interest in Isobel as a person. According to the extract, his tone, if not hostile, was not welcoming. Option C is not plausible in so far as naming five prepositions is not rocket science. If mastery of grammar and not control of the conversation were the issue, there are many more impressive ways of displaying it. Option D is ruled out by the tone of Kenneth's attack. Kenneth was not interested in Isobel's feelings. His words were not a result of ineptitude but of calculation. He wanted to trumpet his own value, not to affirm that of anyone else.

Unit 21 *Celestial Debris*

This unit has a science context and is based on a graph from NASA supported by explanatory text. The items required students to use proportion and percentages and to be able to read and interpret a graph.

Unit 22 *Babbitt*

The items in this unit are based on an extract from an article written in the 1950s by a music theorist and composer who discusses what he sees as a recent revolution in music.

Unit 23 *SET*

This unit is based on a card game described in detail in the stimulus.

Common Curriculum Elements (CCEs) and the MC format

Of the 49 CCEs, the following cannot be tested directly in MC format, though a few CCEs 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 SR format.