Numeracy 2025 v1.2

IA option D: Sample marking scheme

This sample has been compiled by the QCAA to assist and support teachers in planning and developing assessment instruments for individual school settings.

Examination — Workplace and employment

Assessment objectives

This assessment instrument is used to determine student achievement in the following objectives:

1. Identify and interpret mathematical information in the context of workplace and employment.
2. Use and apply mathematical knowledge in the context of workplace and employment.
3. Communicate and represent mathematical knowledge in the context of workplace and employment.

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QCAA Queensland Curriculum & Assessment Authority
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For all Queensland schools

Purpose

The scheme provides:

- explicit statements about what is expected of students when they respond to a question
- sample responses that identify characteristics to assist the marker to make judgments
- where relevant, notes that provide further information to assist the marker in making a decision
- a tool for calibrating markers to ensure comparability of results.

Marking scheme

Note: ✓ = 1 mark

Question 1 (1 mark)

Peter spends $550 per week on work expenses. 20% of the work expense is spent on petrol.

Calculate how much money per week Peter spends on petrol.

$20\% \ of \ \$550$

$= 0.2 \times \$550$

$= \$110$ ✓

Question 2 (1 mark)

A salon pays rent of $350 per week, which is $\frac{1}{2}$ of the weekly income.

How much is the salon's weekly income?

$\$350 \div 0.5 = \$700$ ✓

Question 3 (1 mark)

A truck travels at 60 km/h.

How many hours will it take the truck to drive 240 km?

$\frac{240 \text{ km}}{60 \text{ km/h}} = 4 \text{ hours}$ ✓

Question 4 (1 mark)

A rectangular tile is 9 cm long and 8 cm wide.

What is the area of one rectangular tile in cm^2.

Area $= 9 \times 8$

$= 72 \text{ cm}^2$ ✓

Question 5 (2 marks)

The bill for three customers is shown.

Item	Cost
Burger	$20.45
Steak	$40.85
Sandwich	$17.00

a. What is the total cost of the bill.

Total cost of the bill $= \$20.45 + \$40.85 + \$17.00$

$= \$78.30$ ✓

The three customers decide to split the bill equally.

b. How much should each customer pay?

Each customer should pay $\$78.30 \div 3 = \$26.10$ ✓

Question 6 (1 mark)

A shipping container is 8 m long, 3 m wide and 2.5 m high.

What is the volume of the shipping container in m^3?

Container volume $= 8 \times 3 \times 2.5$

$= 60\ m^3$ ✓

Question 7 (1 mark)

A floor is 4.8 m wide and 12 m long.

What is the perimeter of the floor in m?

Floor perimeter $= 4.8\ m + 12\ m + 4.8\ m + 12\ m$

$= 33.6\ m$ ✓

Question 8 (1 mark)

The table shows Tim's work roster for Monday and Thursday.

Day	Start time	Finish time
Monday	08:00	12:30
Thursday	14:30	19:30

What is Tim's total rostered time?

Tim's total rostered time:

Monday = 4.5 hours

Thursday = 5 hours

Total time = 4.5 + 5 = 9.5 hours ✓

Question 9 (1 mark)

Peta lives 45 minutes from her work.

When should Peta leave home to arrive at work at 8:15am?

Latest leaving time = 45 minutes before 8:15 am

= 7:30 am ✓

Question 10 (1 mark)

The capacity of a jug is 1800 mL.

Convert the capacity to L.

1800 mL = 1.8 L ✓

Question 11 (1 mark)

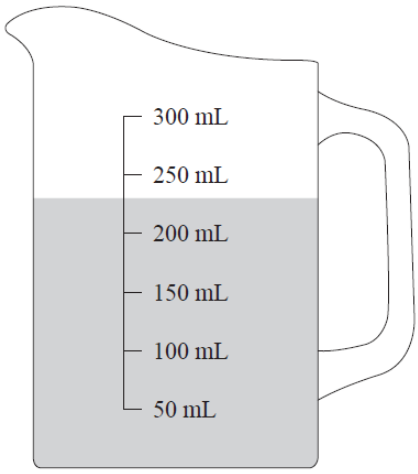
The volume of a freezer is 0.8 m^3.

Convert the volume to cm^3.

0.8 m^3 = 800 000 cm^3 ✓

Question 12 (1 mark)

A chef uses a jug as shown.



Not to scale

Estimate the amount of liquid in the jug in mL

230 mL ✓

Question 13 (2 marks)

A customer has a voucher that states ‘Discount of 15%’.

Their total bill is $178.40.

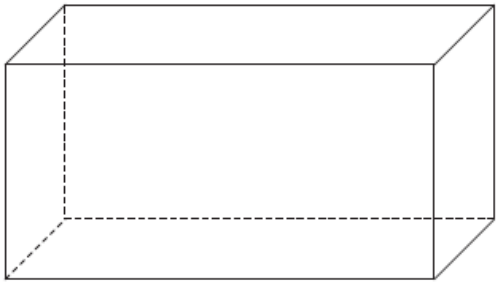
What is the discount amount?

$15\% = 0.15$ ✓

$0.15 \times 178.40 = \$26.76$ ✓

Question 14 (2 marks)

A packaging company has a parcel as shown.



a. Write the name of the parcel's 3D shape.

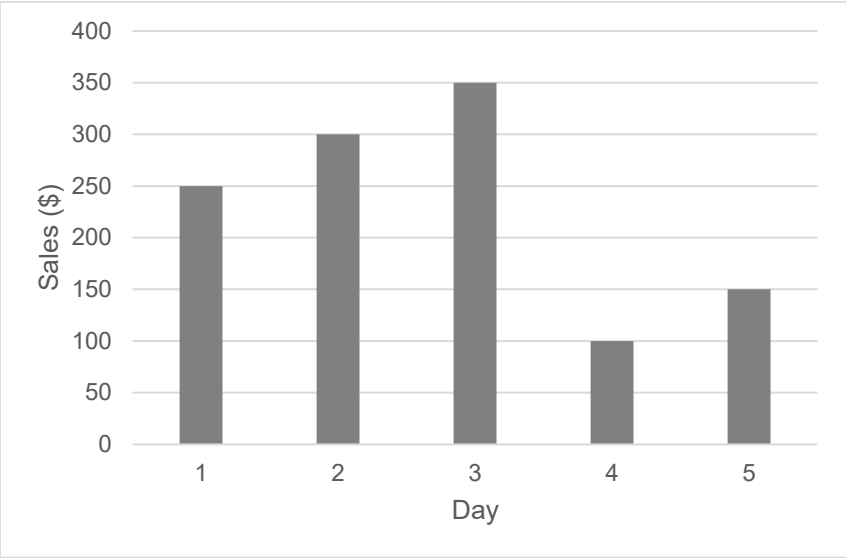
Rectangular prism ✓

b. How many faces does the parcel have?

6 faces ✓

Question 15 (2 marks)

The bar graph shows the sales ($) for 5 days.



a. Which day has the highest sales?

Day 3 ✓

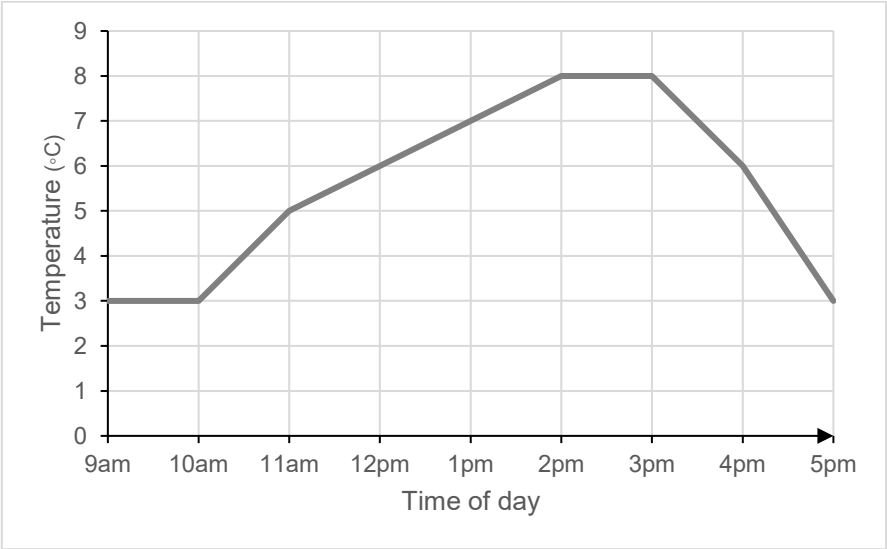
b. Calculate the total sales ($) for the 5 days.

Total sales = $250 + $300 + $350 + $100 + $150

= $1150 ✓

Question 16 (3 marks)

The line graph shows temperatures in a cold room during a day.



a. What is the temperature at 2 pm?

8 °C ✓

b. What is the coldest temperature shown?

3 °C ✓

c. Calculate the change in temperature from 10 am to 2 pm.

8 °C - 3 °C = 5 °C ✓

Question 17 (3 marks)

There were 20 drinks on a table.

lemonade	cola	grape soda	mango smoothie
5	10	4	1

One drink is selected at random.

a. Which drink is most likely to be selected?

Cola ✓

b. Describe the likelihood of selecting a mango smoothie.

Unlikely ✓

c. Calculate the probability for lemonade being selected.

$\Pr(\text{lemonade}) = \frac{5}{20}$ ✓