

**Victorian Certificate of Education  
2019**

# General Achievement Test

**Wednesday 12 June 2019**

**Reading time: 10.00 am to 10.15 am (15 minutes)**

**Writing time: 10.15 am to 1.15 pm (3 hours)**

## QUESTION BOOK

### Structure of book

<i>Type of questions</i>	<i>Number of questions to be answered</i>	<i>Suggested times (minutes)</i>
Writing Task 1	1	30
Writing Task 2	1	30
Multiple-choice questions	70	120

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers and an English and/or bilingual dictionary.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.
- No calculator is allowed in this test.

#### **Materials supplied**

- Question book of 44 pages
- Answer book for **both** Writing Task 1 and Writing Task 2
- Answer page for multiple-choice questions on page 15 of the answer book

#### **Instructions**

- Write your **student number** on the answer book.
- Write your **name** on the multiple-choice answer page on page 15 of the answer book.
- Follow the times suggested for each task.
- All written responses must be in English.

#### **At the end of the test**

- You may keep this question book.

**Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.**

## WRITING TASK 1

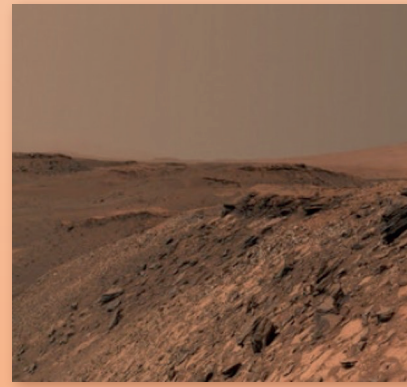
To be answered in the answer book in blue or black pen.  
You are advised to allocate 30 minutes to this task.

Consider the information on these two pages.

Develop a piece of writing presenting the main information in the material. You should **not** present an argument.

Your piece will be judged on:

- how well you organise and present your understanding of the material
- your ability to communicate the information effectively
- how clearly you express yourself.



Mars tugs at the human imagination like no other planet.

Mysterious Mars, alluring Mars, fourth planet from the Sun: so far away and yet, on a cosmic scale, so very near.

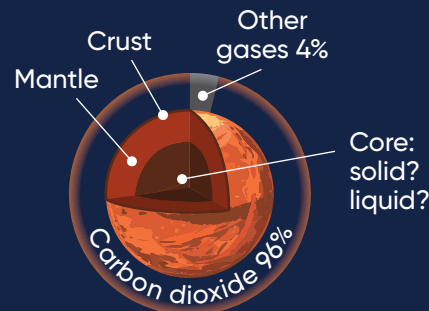
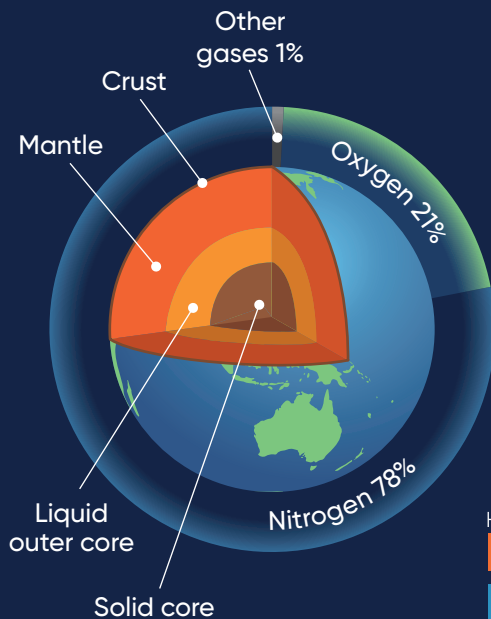
– John Noble Wilford

Abigail Allwood: Australian geologist and astrobiologist, NASA Jet Propulsion Laboratory; principal investigator for PIXL instrument on the Mars Rover 2020 team



Credit: QUT

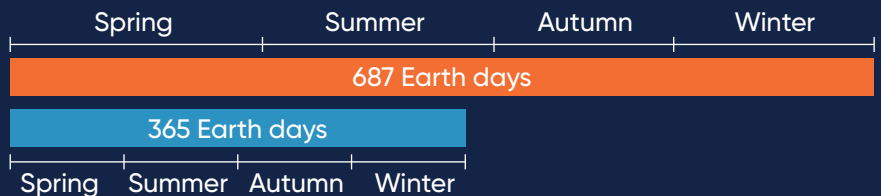
# Earth vs Mars



## Gravity

62.5% less gravity on Mars

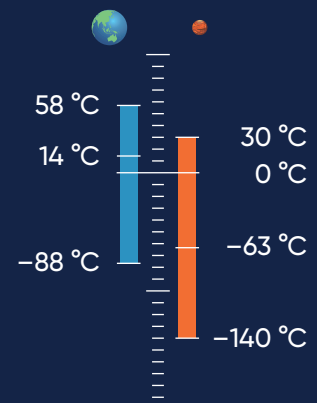
## Year

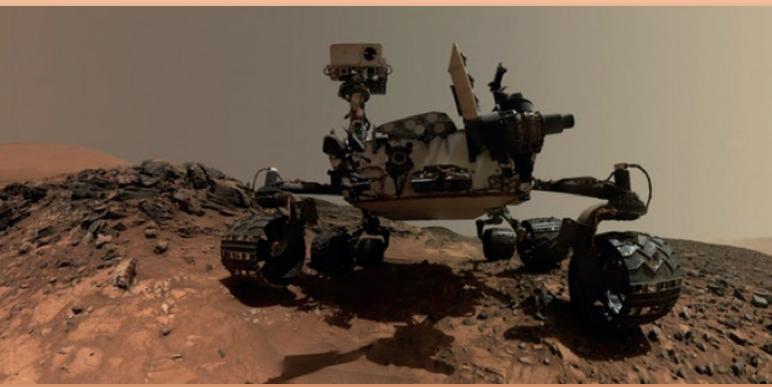


## Distance from the Sun

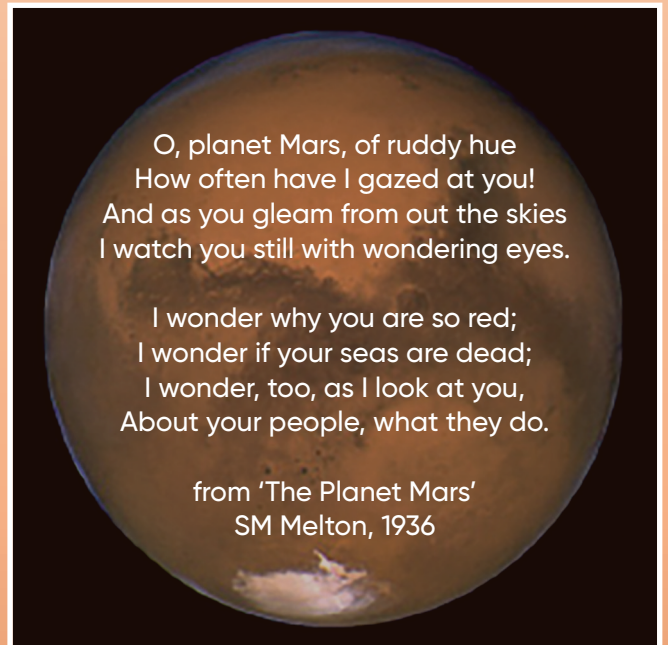


Average surface temperature range





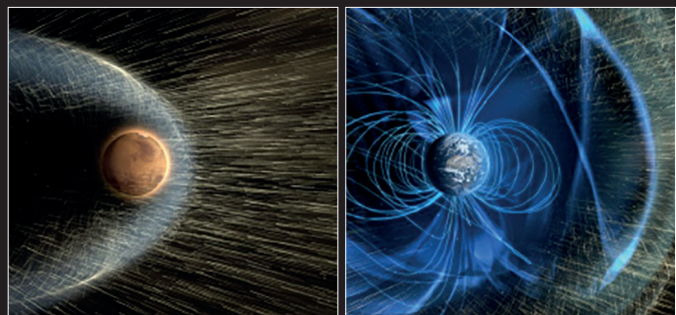
The Curiosity Rover, one of two NASA spacecraft on Mars. The rover is collecting rock samples and taking photographs.



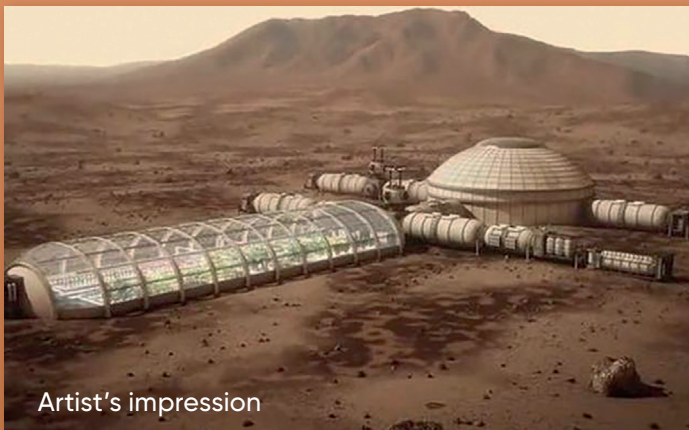
O, planet Mars, of ruddy hue  
How often have I gazed at you!  
And as you gleam from out the skies  
I watch you still with wondering eyes.

I wonder why you are so red;  
I wonder if your seas are dead;  
I wonder, too, as I look at you,  
About your people, what they do.

from 'The Planet Mars'  
SM Melton, 1936

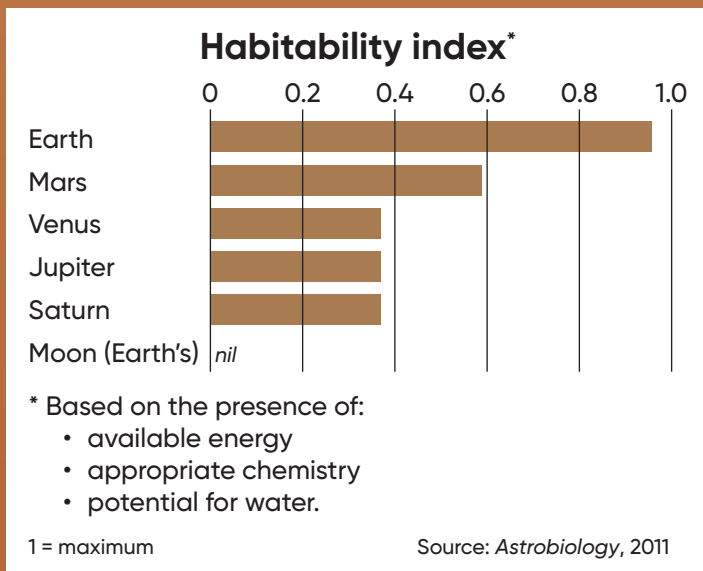


The Sun emits solar winds that have removed most of the atmosphere from Mars. Earth's magnetic field protects Earth's atmosphere from solar winds.



Artist's impression

BCE	Babylonians, Egyptians, Greeks and Romans all observe the position of the red planet. It is often associated with gods of war and conflict.
1609	Galileo is the first to observe Mars through a telescope.
1784	William Herschel speculates that Martian inhabitants 'probably enjoy a situation similar to our own'.
1975	Viking 1 and Viking 2 are the first spacecraft to land on the surface of Mars.
2011	Mars Exploration Rover Opportunity finds evidence that there was once water on Mars.
2018	NASA Insight spacecraft hits the atmosphere of Mars at 19 800 km/h before landing. Its trip to Mars takes seven months.



1950s publications

**WRITING TASK 2**

*To be answered in the answer book in blue or black pen.  
You are advised to allocate 30 minutes to this task.*

Consider the statements below.

Based on **one** or **more** of the statements, develop a piece of writing presenting your point of view.

Your piece of writing will be judged on:

- the extent to which you develop your point of view in a reasonable and convincing way
- how effectively you express yourself.

Most new ideas are old ideas reshaped for new audiences.

The only way to avoid mistakes is to resist new ideas.

There can be no progress without new ideas.

A new idea is often distrusted – until it leads to success.

## MULTIPLE-CHOICE QUESTIONS

*Answer this section in the GAT ANSWER BOOK.  
Mark your answers on the Multiple-Choice Answer Page.*

*You are advised to allocate 2 hours to this task.*

Answer **all** questions in pencil.

Shade your answers on the multiple-choice answer page (page 15) of the answer book.  
Choose the response that is **correct**, or that **best answers the question**.

A correct answer scores 1; an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

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## UNIT 1

## Question 1



*"He is physically able to wag his tail—given sufficient cause."*

- 1 The target of the cartoon is the
- A vet.
  - B dog.
  - C dog's owners.
  - D veterinary medicine.

**UNIT 2**

**Questions 2 – 4**

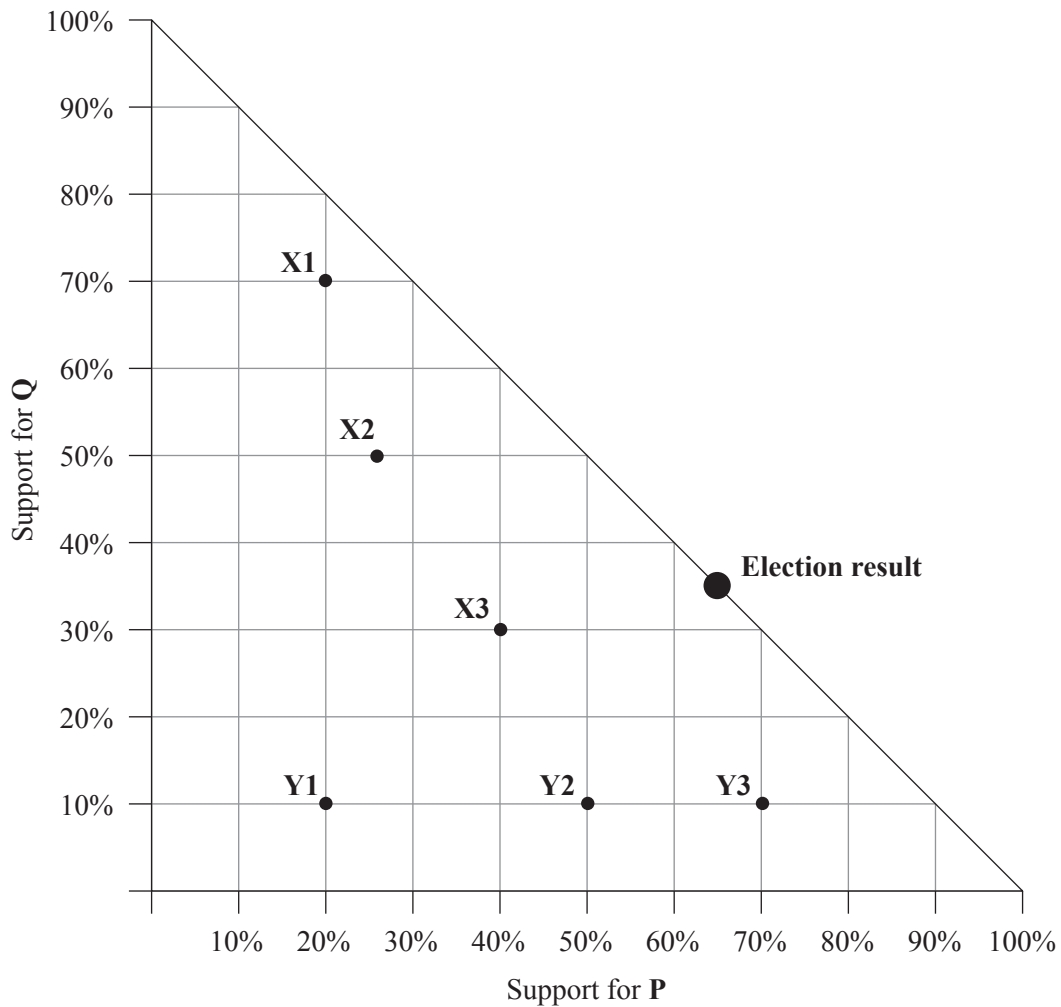
In a local council election, two candidates (**P** and **Q**) competed for the same position.

Leading up to the election, two newspapers (**X** and **Y**) conducted three polls (**1, 2 and 3**), one month apart, of people’s voting intentions:

- Newspaper **X** surveyed the same number of people in each poll.
- Newspaper **Y** surveyed twice as many people in each successive poll.
- Newspaper **X** surveyed twice as many people in poll **X1** as newspaper **Y** surveyed in poll **Y1**.

In the election, **P** gained 65% of the votes and was elected to the council. The remaining 35% of the votes went to **Q**.

The graph shows the results of the polls, as well as the election result.





- 2 Suppose 500 people were surveyed in poll **Y2**.  
How many of those surveyed in **Y2** did **not** support either candidate?
- A 50
  - B 200
  - C 250
  - D 300
- 3 Which poll most closely predicted the percentage support for **P** but less closely predicted the percentage support for **Q** in the election?
- A **X2**
  - B **Y2**
  - C **X3**
  - D **Y3**
- 4 Suppose 2000 people stated they would vote for **Q** in poll **X2**.  
How many people, in total, were surveyed by newspaper **Y**?
- A 7000
  - B 12 000
  - C 14 000
  - D 24 000

## UNIT 3

## Questions 5 – 9

The following passage is from a novel set near Sydney in the early 1800s. Will Thornhill, an Englishman, was transported to Australia as a convict. Sal, his wife, travelled from England to be with him, and to help him earn enough to return to England now that he is a free man. In this extract, Will and Sal are relaxing at night in their hut.

It seemed as good a moment as any to try the idea on her. *There's a bit of land*, he said. *Up the river. Hard by the Branch there.* She did not turn her face from the fire, but he felt her grow very still, listening. *We oughter get it, Sal, before some other bugger does.* He heard his voice catch on the thought so the last words were rough with urgency. 5

*Farmer Will?* she cried, her face alight with the fun of it. *You don't know one end of a turnip from the other!*

*Prime bit of land*, he said, when she had had her fun. *Set ourselves up there like Blackwood done, never look back.* He heard the eagerness in his voice and made himself stop. 10

She saw that he was not joking. *We done all right up till now*, she said. *Got to know when to leave well alone.*

She was right in that: they knew other men who had got land and been too idle to work it, or squandered their profits on horse-flesh and fancy waistcoats. Some had picked a bit of land where nothing would grow and ended up worn to shadows, a paddock of weeds their reward for years of labour. 15

*Will*, she said, and hesitated as if not knowing where to start. She worked at the fire with a stick, then turned to look at him full in the face. *Will, we had a lot of luck*, she said. *We could both be dead and them boys not even born.* She turned back to the fire and spread her hands out to the warmth. He saw how thin her fingers were against the brightness of the flames. 20

*We're doing real good, Will*, she said after a while. *Couple of years we'll have enough to go back.* She glanced quickly at him. *Get the house and them wherries<sup>1</sup>. The stuffed armchairs and that.*

He wanted to convince her that the land would get them the wherries and the house quicker, how the children would thank them for it. But he made himself hold his tongue. 25

<sup>1</sup> *wherries*: light rowing boats used chiefly for carrying passengers

- 5 Will's approach to Sal about the prospect of farming is best described as
- A pushy.
  - B fearless.
  - C tentative.
  - D spontaneous.

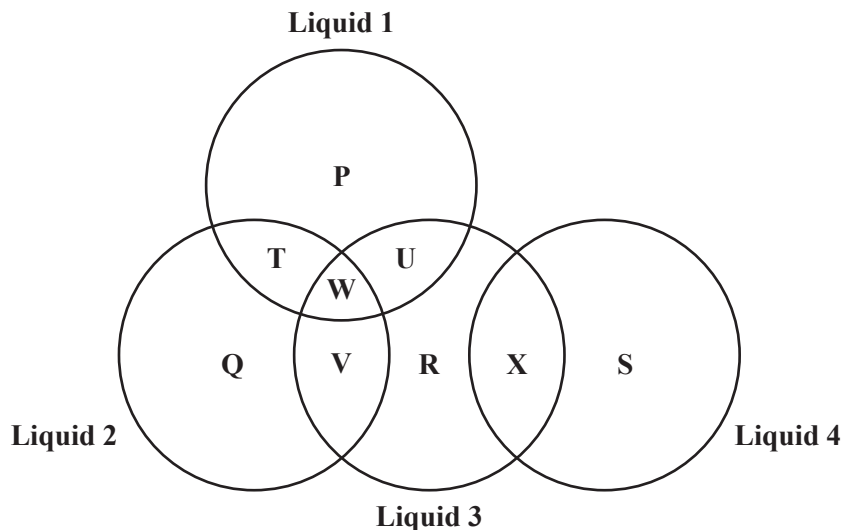
- 6 'It seemed as good a moment as any to try the idea on her.' (line 1)  
These words suggest that, at this moment, Will sees Sal as
- A gullible.
  - B receptive.
  - C inattentive.
  - D submissive.
- 7 '*Will*, she said, and hesitated as if not knowing where to start.' (line 17)  
This suggests that Sal is
- A unsure of what she thinks of Will's idea.
  - B revealing her disappointment and frustration.
  - C trying to make Will feel anxious about her response.
  - D trying to prepare the best counterargument she can.
- 8 When Sal 'glanced quickly' at Will (line 23), it suggests that she
- A is trying to admonish him.
  - B is trying to gauge his reaction.
  - C suspects that he isn't paying attention.
  - D realises that she has already convinced him.
- 9 By the end of the exchange, Sal is best described as
- A enthusiastic.
  - B unconcerned.
  - C contemptuous.
  - D discomposd.

## UNIT 4

### Questions 10 – 13

Solids **P** to **X** are powders that look identical to each other.

The diagram indicates which of these solids dissolve in each of four liquids (1–4). For example, **X** dissolves in both Liquid 3 and Liquid 4, but does not dissolve in Liquid 1 or Liquid 2.



A teacher prepared five mixtures (**i**, **ii**, **iii**, **iv** and **v**) containing equal amounts (mass) of either two, three or four of the solids. For example, Mixture (**i**) contains equal amounts of three of the solids.

The students' task was to observe the extent to which the mixtures dissolved in each liquid, and use the results to determine which solids are present in each mixture.

Only some of the results are shown in the table.

	Number of solids in mixture	Liquid 1	Liquid 2	Liquid 3	Liquid 4
Mixture ( <b>i</b> )	three	?	No solids dissolve	All solids dissolve	?
Mixture ( <b>ii</b> )	four	?	No solids dissolve	?	Some solids dissolve
Mixture ( <b>iii</b> )	three	?	Some solids dissolve	All solids dissolve	No solids dissolve
Mixture ( <b>iv</b> )	three	All solids dissolve	Some solids dissolve	Some solids dissolve	?
Mixture ( <b>v</b> )	two	?	?	All solids dissolve	?

Assume that:

- the solids do not interact with each other
- all tests were conducted under identical conditions.

- 10 How many of the nine solids dissolve in exactly two of the four liquids?
- A two
  - B three
  - C four
  - D five
- 11 Suppose Mixture (v) fully dissolves in Liquid 1 as well as in Liquid 3.  
It follows that for this mixture
- A some solids will dissolve in Liquid 2.
  - B some solids will dissolve in Liquid 4.
  - C all solids will dissolve in Liquid 2.
  - D all solids will dissolve in Liquid 4.
- 12 What would be the result of adding Mixture (iv) to Liquid 4?
- A No solids dissolve.
  - B Some solids dissolve.
  - C All solids dissolve.
  - D It is not possible to tell.
- 13 What would be the result of adding Mixture (iii) to Liquid 1?
- A No solids dissolve.
  - B Some solids dissolve.
  - C All solids dissolve.
  - D It is not possible to tell.

## UNIT 5

### Questions 14 – 16

*The following passage is from an essay published in an online magazine.*

Karl Popper first proposed the criterion of falsifiability as a way of drawing a bright line between science and pseudoscience. If you go out looking for confirmation of a theory or hypothesis, he said, you are almost certain to discover it. For a pseudoscience such as astrology, the predictions are so vaguely stated that any apparent contradiction can be explained away. For Freudian psychology, there's no type of human behaviour that could not be accounted for by unconscious drives.

5

By contrast, good theories or hypotheses are those that allow you to search for contrary evidence. Thus Albert Einstein's theory of general relativity made a very specific prediction about the effect of gravity on light, which could be subsequently tested during the solar eclipse of 1919. Unlike astrology or Freudianism, relativity could be contradicted: it was possible to conceive of an observation that would conflict with one's expectations (although the eclipse ultimately vindicated Einstein).

10

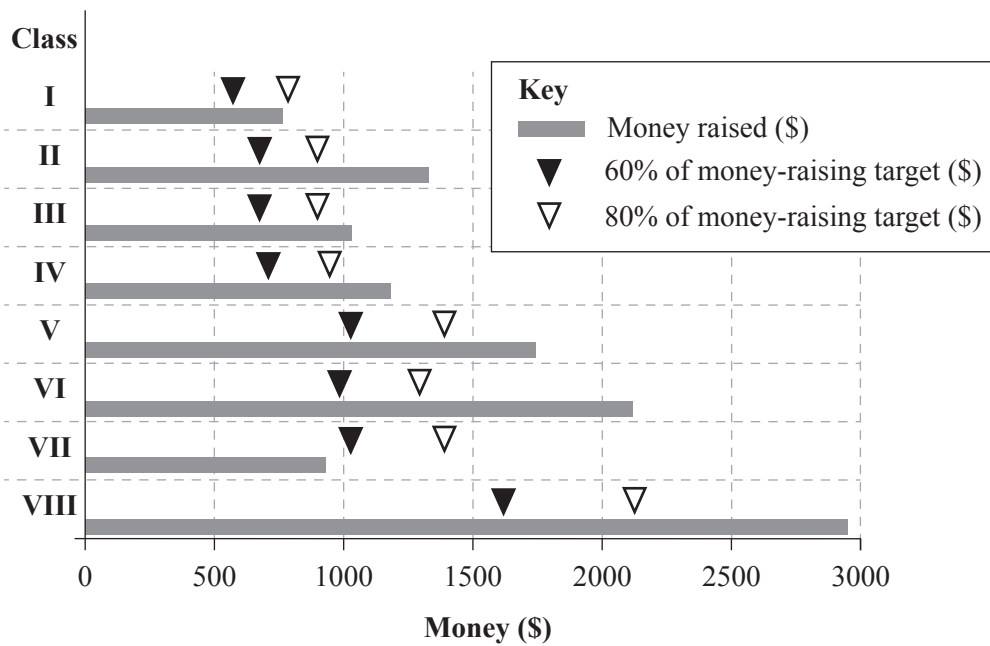
- 14 The passage suggests that Karl Popper's 'criterion of falsifiability' (line 1) distinguishes science from pseudoscience because
- A pseudoscientific claims can always be proven false.
  - B scientific claims are those that can, theoretically, be proven false.
  - C scientists never propose theories or hypotheses that could be shown to be false.
  - D pseudoscientists often propose theories or hypotheses we already know are false.
- 15 According to the passage, Karl Popper believed that 'looking for confirmation of a theory or hypothesis' (lines 2 and 3)
- A leads to excessive amounts of evidence.
  - B is how scientists create new knowledge.
  - C does not prove those theories or hypotheses.
  - D ensures a scientist's theories or hypotheses are correct.
- 16 According to the passage as a whole, astrology and Freudian psychology are examples of pseudoscience because
- A both are based on making predictions.
  - B both make universal claims about what is true.
  - C neither makes claims that are sufficiently intelligible.
  - D neither makes claims that can be adequately disproven.

## UNIT 6

### Questions 17 – 19

Last year, eight classes (I–VIII) in a school organised events to raise money for a chosen charity.

The graph shows the amount of money (in dollars, \$) raised by each class, and compares this with 60% and 80% of the amount of money each class had set as their money-raising target.



- 17 The amount raised by Class III was closest to
- 90% of their target.
  - 100% of their target.
  - 110% of their target.
  - 120% of their target.
- 18 Which class, or classes, might have raised exactly 100% of their target?
- IV only
  - V only
  - both IV and V
  - neither IV nor V
- 19 Which class exceeded their target by the greatest amount?
- VIII
  - VI
  - V
  - II

## UNIT 7

## Questions 20 – 24

**Photographs of Pioneer Women**

You can see from their faces  
 Life was not funny,  
 The streets, when there were streets,  
 Tugging at axles,  
 The settlement ramshackle as a stack of cards. 5  
 And where there were no streets, and no houses,  
 Save their own roof of calico or thatch,  
 The cows coming morning and afternoon  
 From the end-of-world swamp,  
 Udders cemented with mud. 10

There is nothing to equal pioneering labour  
 For wrenching a woman out of shape,  
 Like an old willow, uprooted, thickening.  
 See their strong arms, their shoulders broadened  
 By the rhythmical swing of the axe, or humped 15  
 Under loads they donkeyed on their backs.  
 Some of them found time to be photographed,  
 With bearded husband, and twelve or thirteen children,  
 Looking shocked, but relentless,  
 After first starching the frills of their caps. 20

*Ruth Dallas*

- 20 The first verse (lines 1–10) dwells primarily on the
- A women’s unhappiness.
  - B lack of community support.
  - C bleakness of the environment.
  - D drudgery of the women’s work.
- 21 In the context of the poem, the reference to the ‘old willow’ (line 13) suggests
- A conflict.
  - B decay.
  - C suppleness.
  - D contortion.



- 22 When the poet says the women look ‘shocked’ (line 19), it suggests that they are
- A bitter.
  - B proud.
  - C ashamed.
  - D exhausted.
- 23 In the context of the poem, ‘the frills of their caps’ (line 20) represent the women’s
- A dignity.
  - B frivolity.
  - C nostalgia.
  - D creativity.
- 24 Overall, the pioneer women are presented as
- A stoic.
  - B rebellious.
  - C triumphant.
  - D overwhelmed.

## UNIT 8

### Questions 25 – 27

Cara, a park ranger, noticed that the number of dingoes and brush turkeys in the park changed from year to year. She also noticed that the favourite prey of the dingoes was brush turkey.

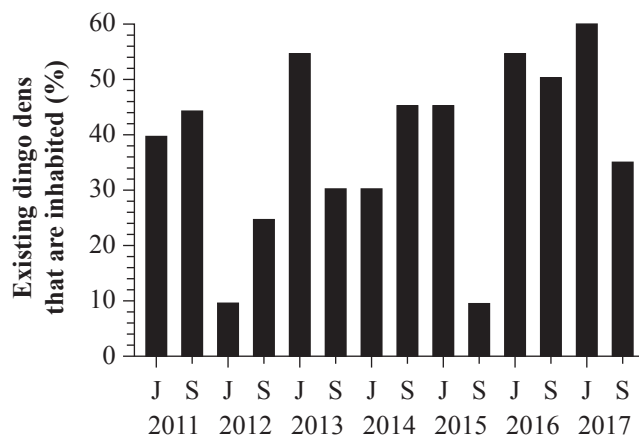
Over a period of 7 years, Cara investigated the relationship between the number of dingoes and brush turkeys in the park. The figures show the results of this study.

Figure 1 shows the percentage of dingo dens in the park that were inhabited during the first week of both January (J) and September (S) from 2011 to 2017.

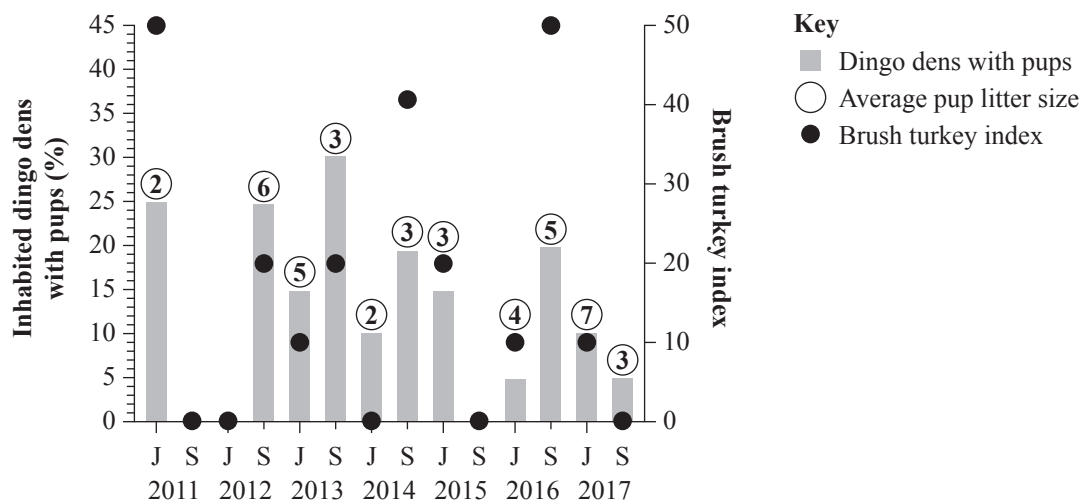
Figure 2 shows the percentage of inhabited dens in which there were dingo pups and the average number of pups (litter size). It also shows the *brush turkey index*: the total number of brush turkeys photographed by 20 camera traps in the first week of each month.

Assume that:

- dingoes in the park always use existing dens
- the total number of dingo dens in the park remained the same during the investigation period.



**Figure 1**



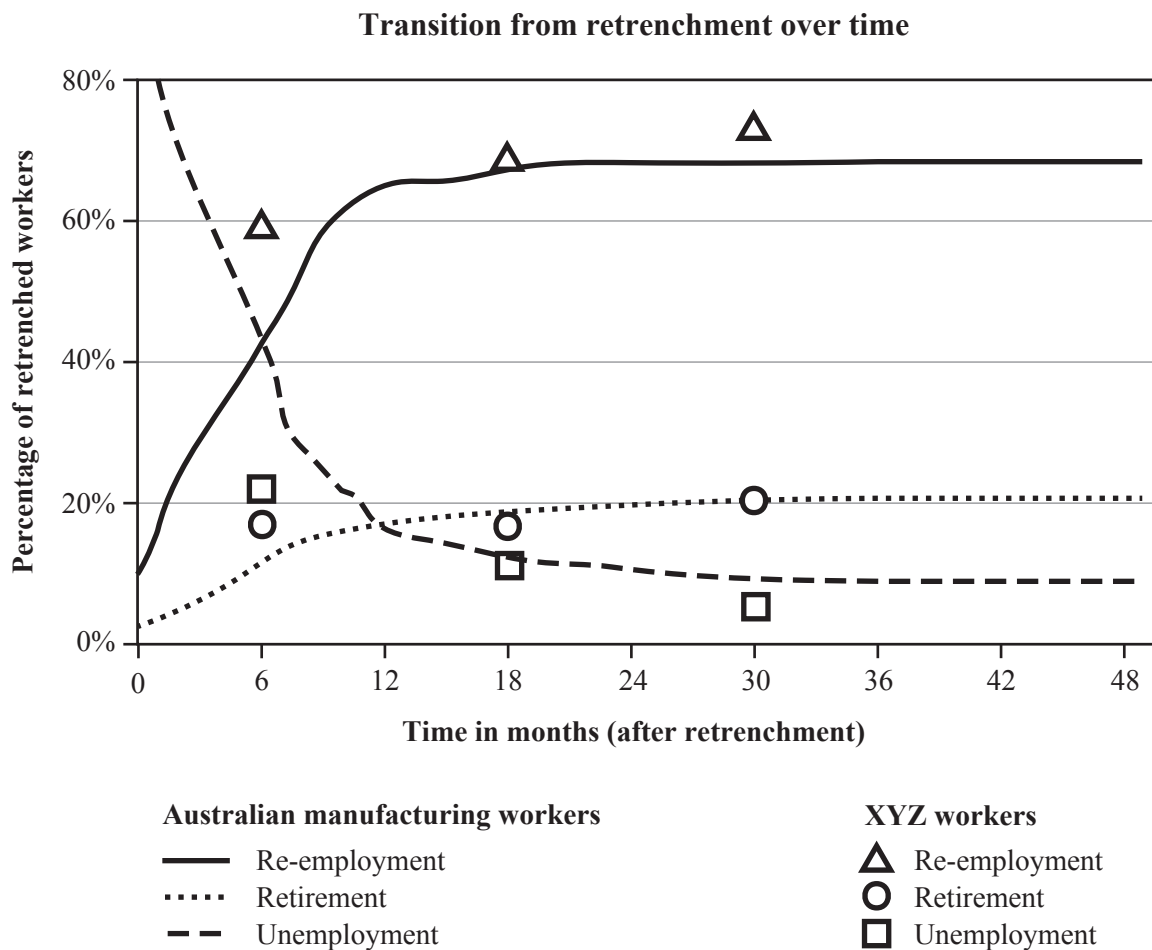
**Figure 2**

- 25 The data best support the conclusion that the average pup litter size of the dingoes in the park
- A increased as the brush turkey index increased.
  - B increased as the brush turkey index decreased.
  - C increased as the percentage of inhabited dens with pups increased.
  - D was unrelated to both the brush turkey index and the percentage of inhabited dens with pups.
- 26 Suppose that all dingo litters contained the average number of pups for that month. At which of the following times was the total number of pups in the litters highest?
- A January 2016
  - B September 2016
  - C January 2017
  - D September 2017
- 27 Consider the hypothesis that the average pup litter size of the dingoes in the park increased as the brush turkey index increased. A comparison of which of the following months would **not** support this hypothesis?
- A January 2011 and September 2011
  - B January 2012 and September 2012
  - C January 2013 and September 2013
  - D January 2014 and September 2014

**UNIT 9**

**Questions 28 – 30**

The XYZ air-conditioning factory in South Australia was closed down and its workers retrenched. The following graph compares their labour market experience following retrenchment with that of retrenched Australian manufacturing workers generally.



- 28 According to the graph, six months after being retrenched, Australian manufacturing workers in general are
- A as likely to be re-employed as unemployed.
  - B as likely to be unemployed as to have retired.
  - C more likely to be unemployed than re-employed.
  - D less likely to be re-employed than to have retired.
- 29 Twelve months after being retrenched, the employment status of which type of worker is most likely to change in the future?
- A Retired workers.
  - B Unemployed workers.
  - C Re-employed workers.
  - D Both unemployed and re-employed workers.
- 30 Which of the following statements is **not** suggested by the graph?
- A Retrenchment often forces people to delay retirement.
  - B Once retired, manufacturing workers tend to stay retired.
  - C A small proportion of workers are at or near retirement age when retrenched.
  - D Most retrenched workers don't retire immediately; they eventually find another job.

## UNIT 10

## Questions 31 – 34

Suppose  $\square + \bigcirc + \triangle = 6x$ ,

$\square + \triangle = 3x - 2$  and

$\bigcirc + \triangle = 4x - 1$ ,

where  $x$  is any number from the set  $\{\dots -3, -2, -1, 0, 1, 2, 3, \dots\}$ .

31  $\square =$

- A  $2x - 1$
- B  $2x + 1$
- C  $10x - 1$
- D  $10x + 1$

32 If  $\bigcirc = 8$ , then  $x =$

- A 0.5
- B 1.5
- C 2
- D 3

33  $\square + \bigcirc + 2\triangle =$

- A  $x + 1$
- B  $x + 3$
- C  $7x - 1$
- D  $7x - 3$

- 34 If  $x \geq 0$ , what can be concluded just from  $\square + \triangle = 3x - 2$  and  $\bigcirc + \triangle = 4x - 1$ ?
- A  $\bigcirc$  is less than  $\triangle$
- B  $\bigcirc$  is greater than  $\square$
- C  $\triangle$  is greater than  $\square$
- D None of A, B or C can be concluded.

### UNIT 11

#### Question 35

<b>I</b> Tomorrow never comes.	<b>III</b> Delay is the antidote of anger.
<b>II</b> No time like the present.	<b>IV</b> Never put off to tomorrow what can be done today.

- 35 Which one of the proverbs above contrasts with the other three?
- A **I**
- B **II**
- C **III**
- D **IV**

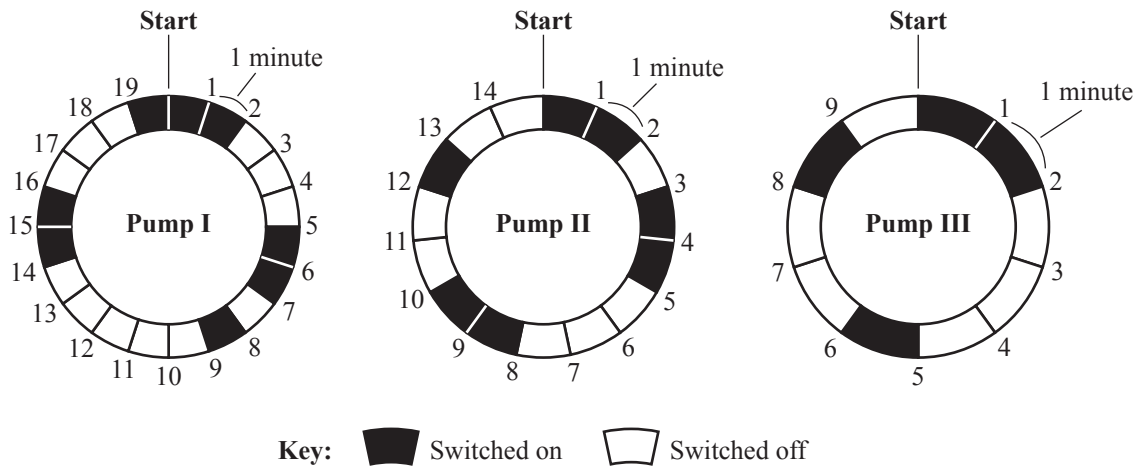
**UNIT 12**

**Questions 36 – 39**

A garden water feature contains three water pumps (**I**, **II** and **III**) that squirt jets of water into the air. Each pump is operated by a program that causes it to alternately switch on and off. A pump remains switched on, or off, for periods of 1 to 5 minutes, in a sequence determined by its program.

The figure below shows that:

- pump **I** switches on 4 times, for a total period of 8 minutes, in a sequence that lasts 20 minutes
- pump **II** switches on 4 times, for a total period of 7 minutes, in a sequence that lasts 15 minutes
- pump **III** switches on 3 times, for a total period of 4 minutes, in a sequence that lasts 10 minutes.



Unless stated otherwise, assume that:

- the pumps start operating together at 8.00 am
- each pump operates continuously according to the sequence shown in the figure.

**36** Which of the following pumps will switch off at 11.25 am?

- A** **I** only
- B** **II** only
- C** both **I** and **III**
- D** both **II** and **III**



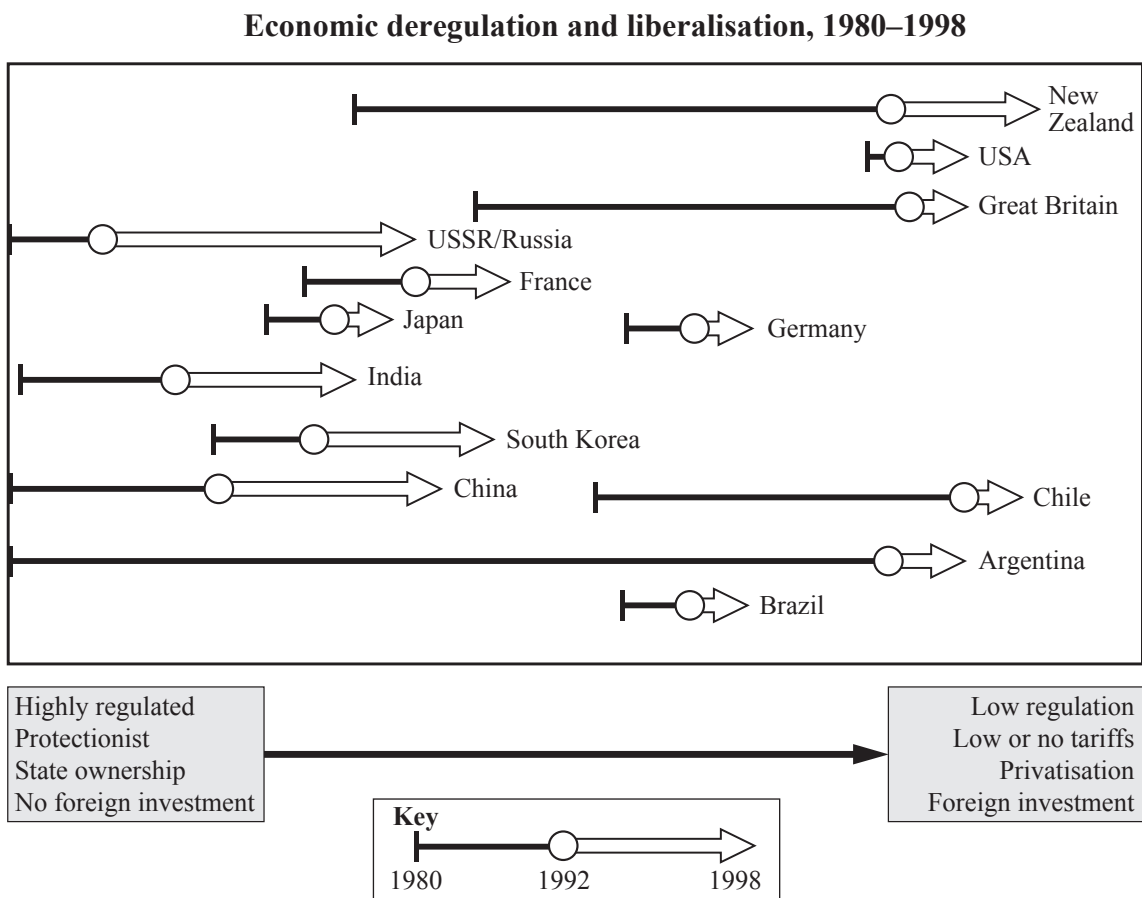
- 37 How many of the pumps are switched on from 8.36 am to 8.38 am?
- A zero
  - B one
  - C two
  - D three
- 38 Suppose another pump, **IV**, is installed into the water feature. **IV** is programmed to be switched on only when two or more of **I**, **II** or **III** are also switched on.
- If **IV** starts operating at 8.00 am, at which of 1.15 pm and 1.18 pm will **IV** switch off?
- A 1.15 pm only
  - B 1.18 pm only
  - C both 1.15 pm and 1.18 pm
  - D neither 1.15 pm nor 1.18 pm
- 39 Suppose that, on one day, pump **I** started operating at 8.00 am, pump **II** at 8.05 am and pump **III** at 8.10 am.
- By 8.20 am, for how many minutes in total had there been **no** jets of water squirting into the air?
- A three
  - B four
  - C five
  - D six

**UNIT 13**

**Questions 40 – 42**

Economic liberalisation is a process in which obstacles to free trade and competition are reduced or eliminated. It often involves reducing the role of government in an economy, deregulating, and encouraging foreign investment. Tariffs, which are taxes imposed on goods by importing countries to protect local manufacturers, are considered an obstacle to free trade.

The following diagram shows the extent of economic deregulation and liberalisation in 13 countries between 1980 and 1998.



- 40 The economy of which of the following countries changed the most during the 1990s?
- A USSR/Russia
  - B Argentina
  - C New Zealand
  - D South Korea
- 41 Which one of the following countries had the most liberalised economy in 1980?
- A Brazil
  - B Chile
  - C Great Britain
  - D Japan
- 42 Which of the following could be concluded from the diagram?
- A More liberalisation occurred in the 1980s than the 1990s.
  - B New Zealand was the first country to fully deregulate its economy.
  - C Argentina's economy grew faster than Brazil's in the 1980s and 1990s.
  - D Liberalised economies are generally more successful than highly regulated economies.

## UNIT 14

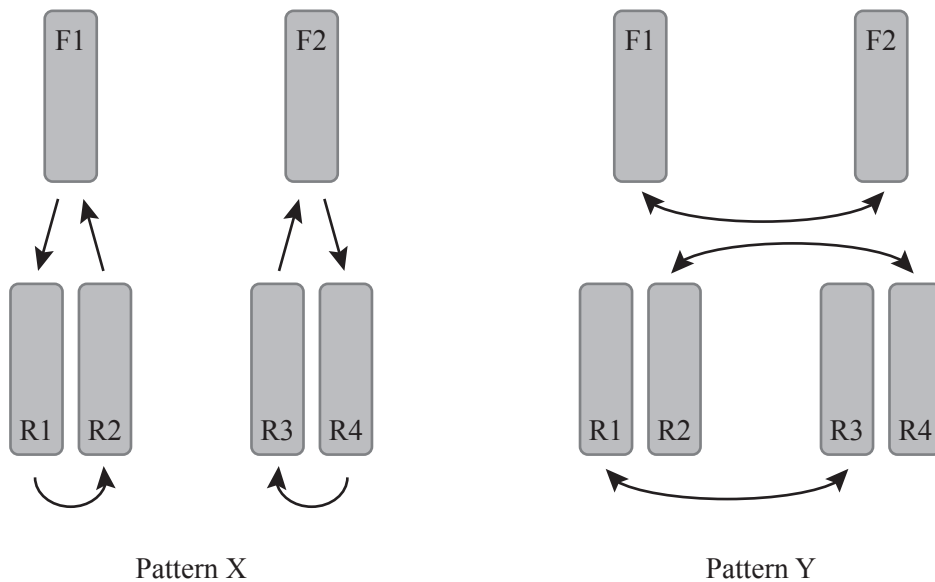
### Questions 43 – 45

Chloe buys three new trucks that have never been driven. Each truck has six new tyres: two at the front (F1 and F2) and four at the rear (R1–R4). Chloe notes the starting position of all the tyres.

Following the manufacturer’s recommendations, when a truck has been driven a total of 5000 kilometres (km), Chloe changes the positions of the tyres to ensure that all tyres wear evenly. Further changes are also made at 5000 km intervals.

The tyre changes for each truck are made according to the patterns shown in the figure:

- Truck 1, Pattern X – F1 to R1, R1 to R2, R2 to F1, F2 to R4, R4 to R3, and R3 to F2
- Truck 2, Pattern Y – F1 and F2 swap, R1 and R3 swap, and R2 and R4 swap
- Truck 3 – odd-numbered changes (i.e. 1st, 3rd, ...) are made according to Pattern X – even-numbered changes (i.e. 2nd, 4th, ...) are made according to Pattern Y.



Assume that each truck is driven in identical conditions.

- 43** Which truck would be best to determine the effect of wear and tear on the front tyres in comparison with the wear and tear on the rear tyres?
- A** Truck 1
  - B** Truck 2
  - C** Truck 3
  - D** any one of the trucks

- 44 Consider the new tyres at position F2 on each truck.

At 27 000 km, these tyres will be at

	<b>Truck 1</b>	<b>Truck 2</b>	<b>Truck 3</b>
<b>A</b>	R3	F1	F2
<b>B</b>	R3	F1	R4
<b>C</b>	R4	F2	F2
<b>D</b>	R4	F2	R4

- 45 Consider the position of the new tyres on Truck 1 and Truck 2.

After how many kilometres will all the tyres on both Truck 1 and Truck 2 be returned to their starting positions?

- A 10 000
- B 15 000
- C 30 000
- D 40 000

## UNIT 15

## Questions 46 – 49

*The following passage is from a short story. Mr Kramer is the boss of a butter factory, and his son, Lionel, 18, is starting work there in a position of authority. Lily Posen, who is in her 40s, has worked for Mr Kramer for 15 years.*

‘And this,’ Mr Kramer said to Miss Posen, ‘is my son, Lionel.’

‘Mr Kramer! You’re teasing me,’ Miss Posen said reprovingly.

The old man winked at his son, who stood with him at Miss Posen’s desk. Embarrassed but proud, determined not to reveal the quiver within him, Lionel turned to go to the next room, but his father took him by the sleeve. ‘You must let Miss Posen have a good look, so that she’ll remember you.’

5

‘Oh, Mr Kramer!’

And the young man said: ‘Miss Posen’s seen me often enough.’

‘But you are different now. We are all different, aren’t we, Lily, now that the younger generation has come to take our place?’

10

The boy was smiling, flattered but a little wearied by his father’s pleasure in him. ‘I’m no different from what I was. And we’re interfering with Miss Posen’s work.’

‘Do you hear that?’ Mr Kramer jokingly shook his finger at Miss Posen. ‘Already Lionel is worrying about the work. It’s a good sign, Lily. We’ll all have to work hard now that he is here. New hands and a new young man make a new order.’

15

It seemed that Miss Posen could respond only by shaking her head and blushing slightly. But she managed to say: ‘You’re young enough, Mr Kramer—’. She shook her head again.

‘How can you say that, when the proof is standing here next to me that one of these days I must go?’ The old man spoke mischievously, provoking them both.

20

‘I don’t believe it,’ Miss Posen said, looking down at the papers on her desk.

There was a sudden pause. Frightened at the effect of her words Miss Posen said: ‘All I can do is carry on with my work. That’s all you want of me, Mr Kramer?’

‘Of course.’

46 Lionel is ‘determined not to reveal the quiver within him’ (line 4).

This suggests he is trying to

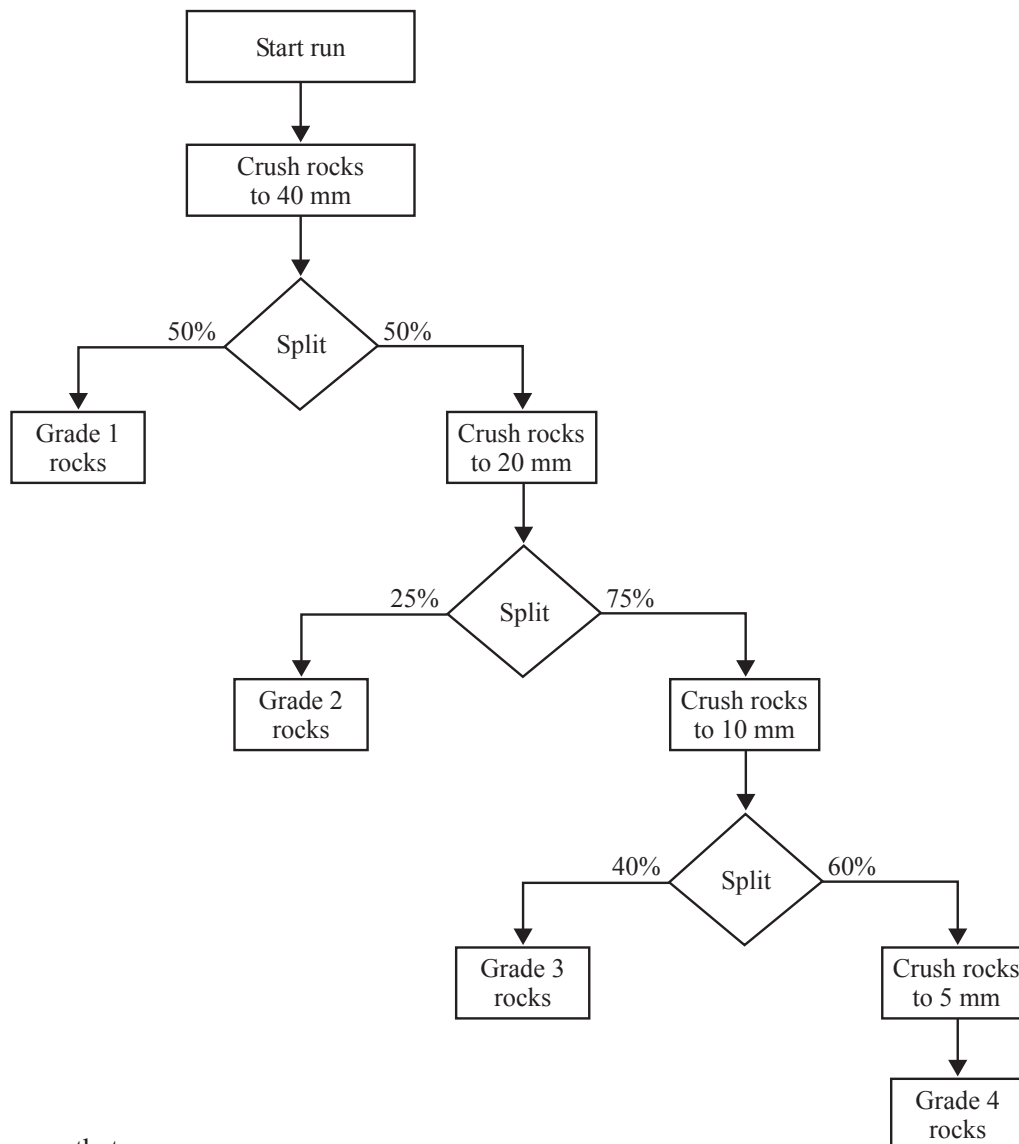
- A conceal his dislike of Miss Posen.
- B appear more self-assured than he really is.
- C conceal the irritation he feels towards his father.
- D appear more enthusiastic about his new job than he really is.

- 47 How does Mr Kramer treat Miss Posen?
- A coldly and dismissively
  - B in a mocking, condescending way
  - C in a genial but slightly domineering way
  - D with deference and a desire for her approval
- 48 What is the effect of the ‘sudden pause’ (line 22) on Miss Posen?
- A She worries she has been too frank.
  - B She worries she has been too sarcastic.
  - C She is concerned that she has not made herself clear.
  - D She worries she has come across as dull and awkward.
- 49 Mr Kramer introduces Lionel to Miss Posen
- A as a symbolic gesture.
  - B as a form of social banter.
  - C to annoy and embarrass Lionel.
  - D because Miss Posen has not met him before.

**UNIT 16**

**Questions 50 – 53**

A company supplies rocks in four different *grades* (1–4). To produce these, the company places an initial batch of rocks into a crushing machine. The processing of a batch of rocks is called a ‘run’. In each run, the rocks are first crushed to a diameter of 40 mm. The 40 mm rocks are then split into two batches. Some of the rocks are then crushed further, as shown in the figure.



Assume that:

- each run costs the company \$500
- for a run, profit equals the price the company charges, less the run costs
- the price the company charges for each grade of rocks is shown in the table below.

	Dollars per cubic metre
Grade 1	70
Grade 2	80
Grade 3	90
Grade 4	100



- 50** For any initial batch, which grade of rock was produced in the greatest amount?
- A** Grade 1
  - B** Grade 2
  - C** Grade 3
  - D** Grade 4
- 51** In a run, an initial batch of rocks produced 270 cubic metres of Grade 4 rocks.  
How many cubic metres of Grade 3 rocks were produced?
- A** 162
  - B** 180
  - C** 225
  - D** 450
- 52** The company sold all the Grade 2 rocks produced from a run for \$1200.  
For how much could they sell all the Grade 3 rocks from the same run?
- A** \$1620
  - B** \$2430
  - C** \$3600
  - D** \$4050
- 53** The company gets an order for 360 cubic metres of Grade 2 rocks and 360 cubic metres of Grade 3 rocks.  
What is the minimum amount of rocks that should be crushed in the initial batch in order to fulfil this order in a single run?
- A** 900 cubic metres
  - B** 1440 cubic metres
  - C** 2400 cubic metres
  - D** 2880 cubic metres

## UNIT 17

**Questions 54 – 57**

*The following passage comes from a 1991 cultural studies book about domestic photography. In the passage, the writer discusses family photo albums.*

Often guarded by a self-appointed archivist, albums construct their own versions of family history, in negotiation with the ideal. Aware of the ever-present possibility of scandal, they will include significant moments and suitable family members and rigorously exclude others. Difficult individuals like divorced spouses and nonconforming siblings tend to be absent. Sickness, disease and disability are barely visible. Illegitimacy is concealed. Problems are suppressed, if only for the split second that the shutter is open. 5

We could ask: for whom is this image so carefully, so spontaneously manufactured? Family photography is not expected to be appreciated by outsiders, yet there is a need to produce the correct pictures, as if the audience were the public at large. Is each individual looking for their ideal image? Are members of the group presenting themselves for each other, or for unknown ‘others’, for future generations? Is this a joint self-celebration, or is it a presentation of the imagined family group for the critical scrutiny of others – even if those outsiders are never expected to see it? 10 15

Of course not all members of the family have the same relationship to the pictures in the album. The father is least visible, for it remains his role to handle the apparatus that controls the image, to point, frame and shoot. Yet from the earliest days, advertisements for cameras have shown women behind the lens. This is, no doubt, a device to indicate how simple it is to take a snap; nevertheless, it demonstrates a form of photography in which women are urged to participate. Even now it is difficult for a woman to become a fashion photographer, a photojournalist or an advertising photographer, but any woman can take a snapshot. Like preparing the meals and washing the clothes, this too, located in the home and family, is sold as a domestic skill. 20 25

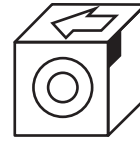
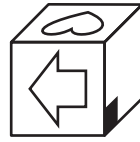
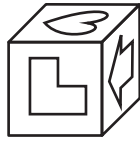
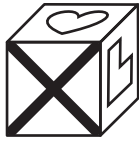
- 54 The words ‘self-appointed archivist’ (line 1) suggest that the job of maintaining the family’s photo album
- A is highly valued.
  - B is rarely contested.
  - C needs to be done properly.
  - D is quite onerous and demanding.

- 55** The writer suggests that family photographs that are ‘so carefully, so spontaneously manufactured’ (lines 8 and 9)
- A** are boring and dull.
  - B** can still be very creative.
  - C** are always slightly contrived.
  - D** reveal more than they intend to.
- 56** In lines 17–19, the writer suggests that
- A** parents tend to adhere to traditional gender roles.
  - B** fathers tend to be more camera-shy than mothers.
  - C** fathers tend to be better photographers than mothers.
  - D** parents do not always adhere to traditional gender roles.
- 57** The writer implies that camera advertisements with ‘women behind the lens’ (lines 18 and 19) are
- A** ineffective.
  - B** misleading.
  - C** long overdue.
  - D** condescending.

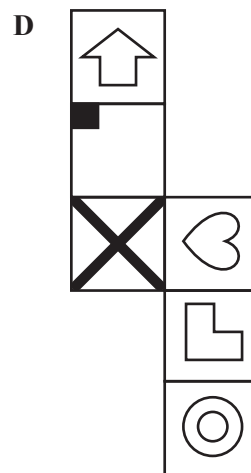
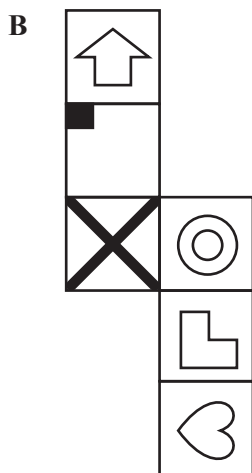
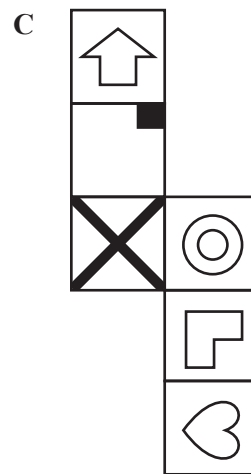
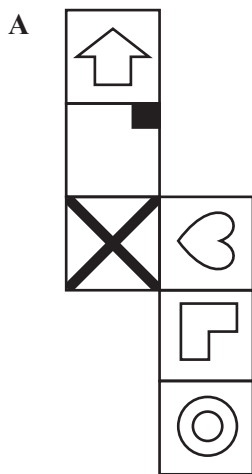
UNIT 18

Question 58

A closed box has a different shape on every face, as shown.



58 Which of the following will fold to make the box?



UNIT 19

Questions 59 and 60

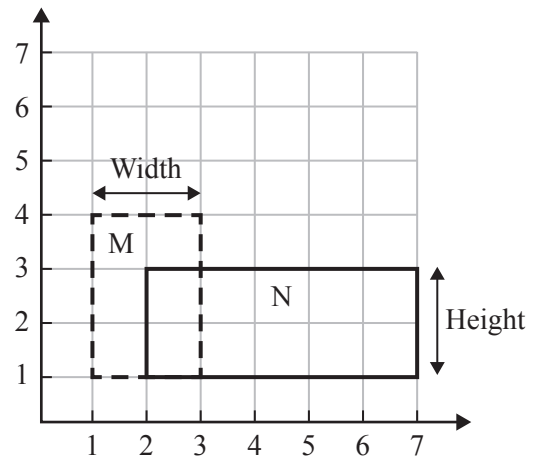
Two rectangles, M and N, are shown on the grid.

Both Elliot and Rita represent rectangles on this grid using their own shorthand methods.

Elliot represents M as (2, 3, 2, 2.5) and N as (5, 2, 4.5, 2).

Rita represents M as (1, 1, 3, 4) and N as (2, 1, 7, 3).

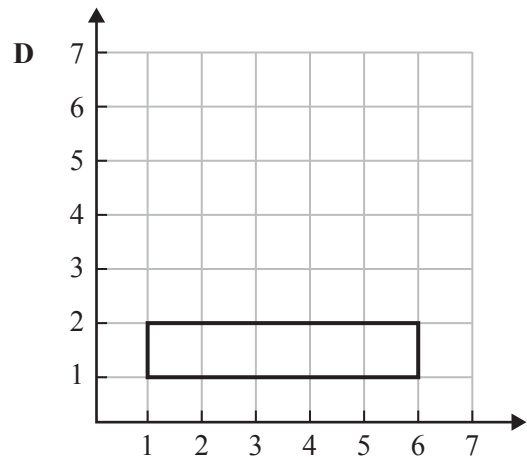
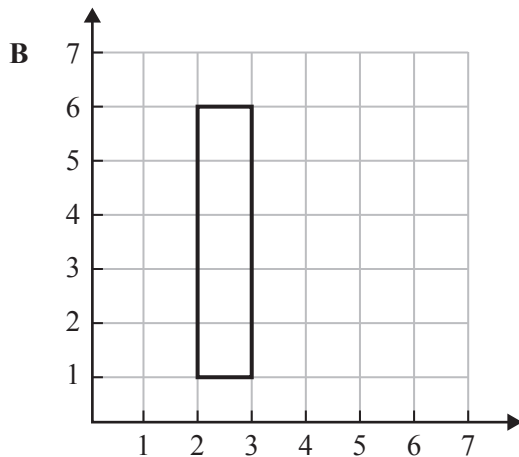
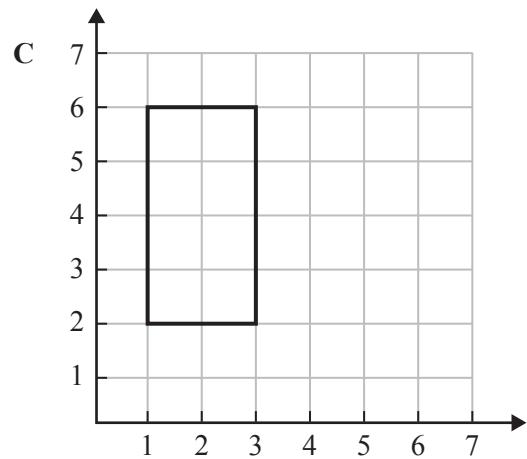
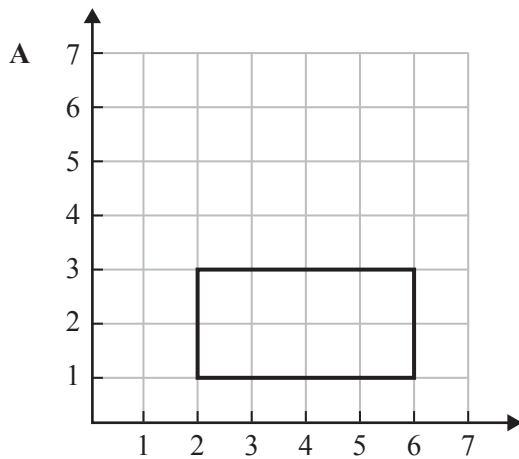
Note: For a rectangle, Area = Width  $\times$  Height



59 Which of the following could be Elliot's representation of a rectangle that is wider and shorter than **both** M and N?

- A (1, 6, 1, 3)
- B (1, 1, 3, 4.5)
- C (6, 6, 3, 1)
- D (6, 1, 0.5, 3)


60 How would Rita draw the rectangle represented, using her method, by (2, 1, 3, 6)?



## UNIT 20

## Questions 61 – 64

Consider the following quotation and cartoon.

<p style="text-align: center;"><b>I</b></p> <p>Eccentricity is not, as dull people would have us believe, a form of madness. It is often a kind of innocent pride, and the man of genius and the aristocrat are frequently regarded as eccentrics because genius and aristocrat are entirely unafraid of and uninfluenced by the opinions of the crowd.</p> <p style="text-align: right;"><i>Edith Sitwell</i> <i>English biographer, critic,</i> <i>novelist and poet</i> <i>(1887–1964)</i></p>	<p style="text-align: center;"><b>II</b></p>  <p style="text-align: center;">‘I’m an eccentric. What do you do?’</p>
---	---

- 61 To Sitwell, the people labelled ‘genius’ or ‘aristocrat’ appear to be
- A mad.
  - B meek.
  - C unaffected.
  - D unconvincing.
- 62 The word ‘dull’ (in line 1 of I) is used to describe people who
- A hold a conventional viewpoint.
  - B have a low boredom threshold.
  - C endure uninteresting social lives.
  - D display an insensitive attitude to others.

- 63 The man in the foreground in **II** is presented as
- A a genius.
  - B an aristocrat.
  - C both a genius and an aristocrat.
  - D neither a genius nor an aristocrat.
- 64 With which one of the following statements would both Sitwell (**I**) and the cartoonist (**II**) agree?
- A We are all eccentric in our own way.
  - B Eccentricity is the refuge of the antisocial.
  - C True eccentrics are unaware that they are so.
  - D All eccentrics are merely rebels without a cause.

**UNIT 21**

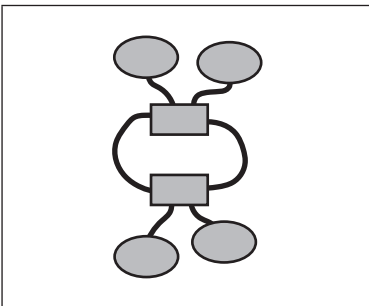
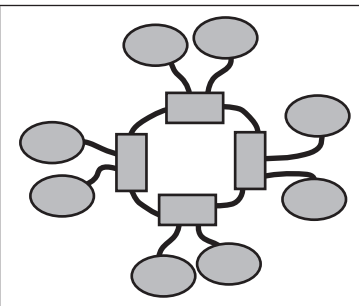
**Questions 65 – 68**


Maisy has a company that sets up computer networks.

In Maisy’s networks, digital information is sent around a ring of *Media Access Units* (MAUs). The MAUs are connected to *computers* (CPUs) and other MAUs through *communication pathways* (PWs).

In all of Maisy’s networks, the MAUs are connected to form a single ring. Each MAU is also connected to two CPUs. Maisy’s networks have a minimum of two MAUs.

The table shows diagrams of two of Maisy’s networks. Each has a different number of components.

		
■ = number of MAUs	2	4
● = number of CPUs	4	8
◆ = number of PWs	6	12

<b>Key</b>	 = MAU	 = CPU	 = PW
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65 Consider the following relationships:

**I**  $2\blacklozenge = 3\bullet$

**II**  $\blacklozenge = \bullet + \blacksquare$

Which of **I** and **II** is true of all of Maisy’s networks?

- A **I** only
- B **II** only
- C both **I** and **II**
- D neither **I** nor **II**



**Questions 66 – 68 refer to the following additional information.**

Ben also has a computer company. In Ben’s networks:

- there are at least two MAUs and all MAUs are connected in a single ring
- at least one CPU is connected to each MAU
- each MAU is connected to the same number of CPUs.

66 In one of Ben’s networks,  $\blacklozenge = 54$  and  $\blacksquare = 9$ .  
What is the value of  $\bullet$ ?

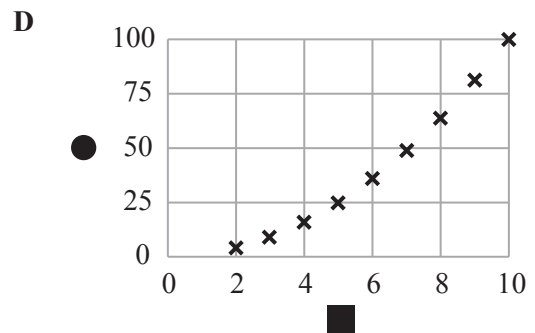
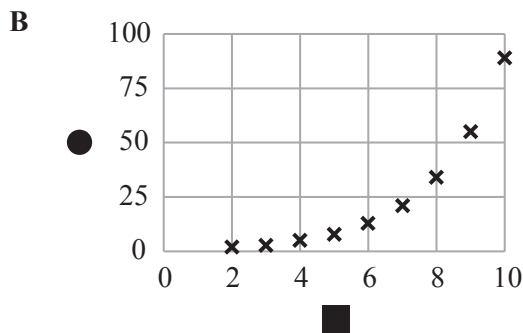
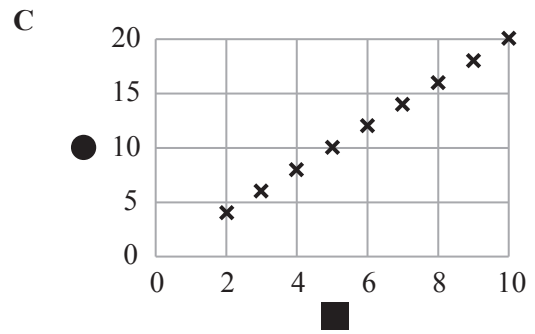
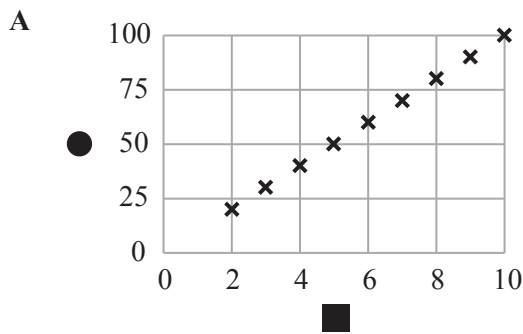
- |      |      |
|------|------|
| A 27 | C 48 |
| B 45 | D 63 |

67 In one of Ben’s networks,  $\blacklozenge = 56$  and  $\blacksquare = 8$ .  
How many CPUs are connected to each MAU?

- |     |     |
|-----|-----|
| A 5 | C 7 |
| B 6 | D 8 |

68 Ben makes a series of networks in which the number of CPUs connected to each MAU is equal to the number of MAUs in the network.

Which of the following graphs shows the relationship between the number of MAUs and the number of CPUs in this series of networks?



**UNIT 22**

**Questions 69 and 70**

*On the opposite page are two portraits by John Singer Sargent. Portrait 1 is called 'The Daughters of Edward Darley Boit' and was painted in 1882. It shows the girls in their family's Paris apartment. Sargent painted Portrait 2, 'Portrait of Two Children', in 1887.*

**69** In Portrait 1, which of the following best describes the way the girls are presented?

- A** allied and wilful
- B** sullen and lethargic
- C** spoilt and disdainful
- D** reserved and detached

**70** In comparison with Portrait 2, the most striking aspect of Portrait 1 is its

- A** conventionality.
- B** sentimentality.
- C** informality.
- D** jocularity.



Portrait 1



Portrait 2

### GAT 2019 source references

Dr Abigail Allwood, photo courtesy of Queensland University of Technology.

Edward Frascino cartoon, *The New Yorker*, 17 May 1993; Edward Frascino/The New Yorker Collection/The Cartoon Bank; © Condé Nast

*The Secret River*, Kate Grenville, Text Publishing, 2005; © Kate Grenville, *The Secret River*, reproduced with permission from The Text Publishing Company Pty Ltd

‘Is linguistics a science?’, Arika Okrent, <<https://aeon.co/essays/is-the-study-of-language-a-science>>; This essay was originally published in Aeon, <<https://aeon.co/>>.

‘Photographs of Pioneer Women’, Ruth Dallas, *Penguin Book of New Zealand Verse*, eds. Ian Weddie and Harvey McQueen, Penguin, 1985; permission granted by Joan Dutton, Literary Executor, Estate Ruth Dallas

‘The Boss’, Dan Jacobson, *A Sense of Belonging: A Short Story Anthology*, ed. John Stevens, OUP, 1989; ‘The Boss’ by Dan Jacobson (© Dan Jacobson, 1989), reprinted by permission of AM Heath & Co. Ltd

*Family Snaps: the Meanings of Domestic Photography*, eds. Jo Spence and Patricia Holland, Virago Press, 1991; © Jo Spence

‘I’m an eccentric. What do you do?’ Joseph Farris, Cartoon Stock, <[www.CartoonStock.com](http://www.CartoonStock.com)>

‘The Daughters of Edward Darley Boit’, John Singer Sargent, Museum of Fine Arts, Boston.

‘Portrait of Two Children’, John Singer Sargent, <[www.wikiart.org/en/john-singer-sargent/portrait-of-two-children-1887](http://www.wikiart.org/en/john-singer-sargent/portrait-of-two-children-1887)>.