Centre Number

Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1MA1/2F**

Mathematics

PAPER 2 (Calculator)
Foundation Tier
Mock set 7

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may be used**.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The total mark for this paper is 80
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question*.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

Pearson

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1   Write the number 28 497 correct to the nearest 1000

....

(Total for Question 1 is 1 mark)

2   Write the following numbers in order of size.
Start with the smallest number.

0.6   0.04   0.52   0.167   0.3

....

(Total for Question 2 is 1 mark)

3   Write 0.327 as a fraction.

....

(Total for Question 3 is 1 mark)

4   Work out $\dfrac{1}{5}$ of 930

....

(Total for Question 4 is 1 mark)

5 Here is a polygon.
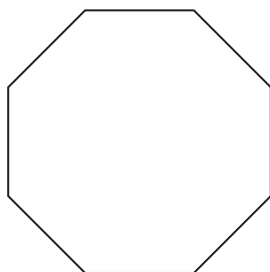
Write down the name of this polygon.

....

(Total for Question 5 is 1 mark)

6 (a) Find $\sqrt{46.24}$

....

(1)

Here is a list of numbers.

$$3 \qquad 5 \qquad 9 \qquad 16 \qquad 25 \qquad 84 \qquad 125$$

Keerat is asked to choose a cube number from the list.
He says
    "5 cubed is 125 so 5 is a cube number."

Keerat is wrong.

(b) Explain why.

....

....

....

(1)

(Total for Question 6 is 2 marks)

S 7 0 4 0 1 A 0 3 2 4

7 Nisha has a knitting pattern for a woollen jumper.

She used 8 balls of red wool to make a jumper.
Each ball of red wool has a length of 280 metres.

Nisha wants to use the same pattern to make a jumper using blue wool.
Each ball of blue wool has a length of 390 metres.

How many balls of blue wool does Nisha need to buy?

....

(Total for Question 7 is 3 marks)

8 (a) Simplify $3 \times x \times y \times 4$

....

(1)

(b) Simplify $2 \times m \times m \times m \times m \times m$

....

(1)

(Total for Question 8 is 2 marks)

9 Alicia has 8 cards.
Each card has a letter on it and the letters spell out the word **PARALLEL**.

P	A	R	A	L	L	E	L

Alicia takes at random one of the cards.

(a) (i) Which letter is **most** likely to be on the card Alicia takes?

....
(1)

(ii) Find the probability that **E** is the letter on the card Alicia takes.
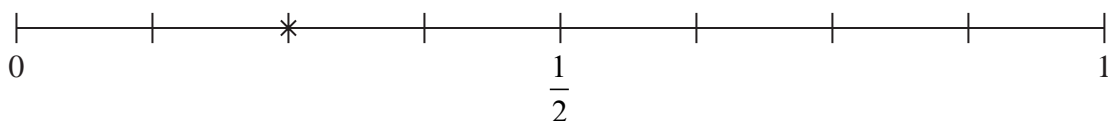
....
(1)

(b) On the probability scale below, mark with a cross (✕) the probability that **S** is the letter on the card Alicia takes.

$$0 \qquad \qquad \frac{1}{2} \qquad \qquad 1$$
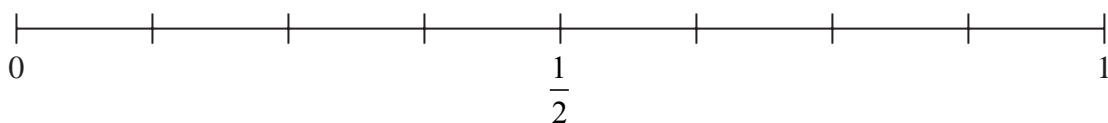
(1)

Here is a probability scale.
The cross (✕) shows the probability of the letter on the card Alicia takes.

$$0 \qquad \qquad \frac{1}{2} \qquad \qquad 1$$

(c) Write down the letter on the card Alicia takes.

....
(1)

(Total for Question 9 is 4 marks)

10 (a) Write down a suitable metric unit for measuring the length of a pencil.

....

(1)

The price of each pencil in a shop is the same.
The price of 5 pencils in the shop is 85p.

Tyler spends £2.04 on pencils.

(b) How many pencils does Tyler buy?

....

(2)

(Total for Question 10 is 3 marks)

11 (a) How many minutes are there in 10.5 hours?

.... minutes

(1)

Benji is going to bake a fruit cake.
The cake will take 95 minutes to bake.

Benji wants the cake to finish baking at 17 30

(b) At what time should Benji start baking the cake?

....

(2)

(Total for Question 11 is 3 marks)

12 A total of 275 people took a driving theory test on Monday.
Of these people, 68% passed the test.

(a) (i) What percentage of people who took the test on Monday did **not** pass the test?

....%

(1)

(ii) How many of the 275 people who took the test on Monday passed the test?

....

(2)

On Wednesday, a total of 90 people took a practical driving test.
Of these people, 72 passed the test.

(b) Write as a ratio the number of people who passed the practical test to the number of people who did **not** pass the practical test.
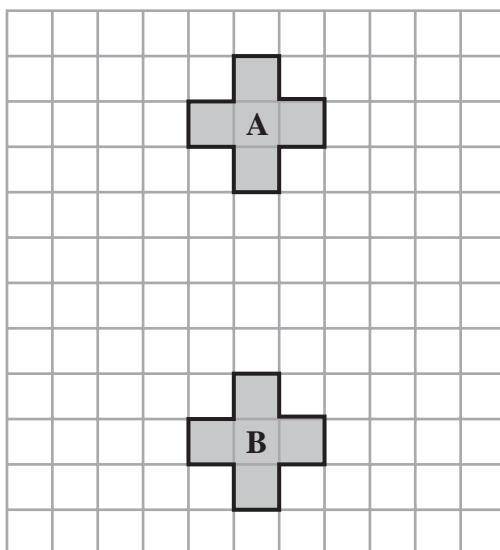Give your ratio in its simplest form.

....

(2)

(Total for Question 12 is 5 marks)

S 7 0 4 0 1 A 0 7 2 4

13 Shape **B** is a reflection of shape **A**.

(a) On the grid, draw the mirror line.

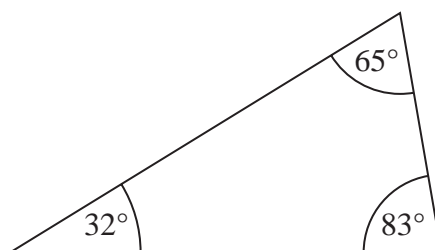**(1)**

A circle with diameter 3 cm is enlarged.
The diameter of the enlarged circle is 15 cm.

(b) Write down the scale factor of the enlargement.

....

(1)

Here is a triangle.

Phil says that if he drew an enlargement of the triangle with a scale factor of 2 then the angles would be 64°, 130° and 166°

(c) Is Phil correct?
    Give a reason for your answer.

....

....
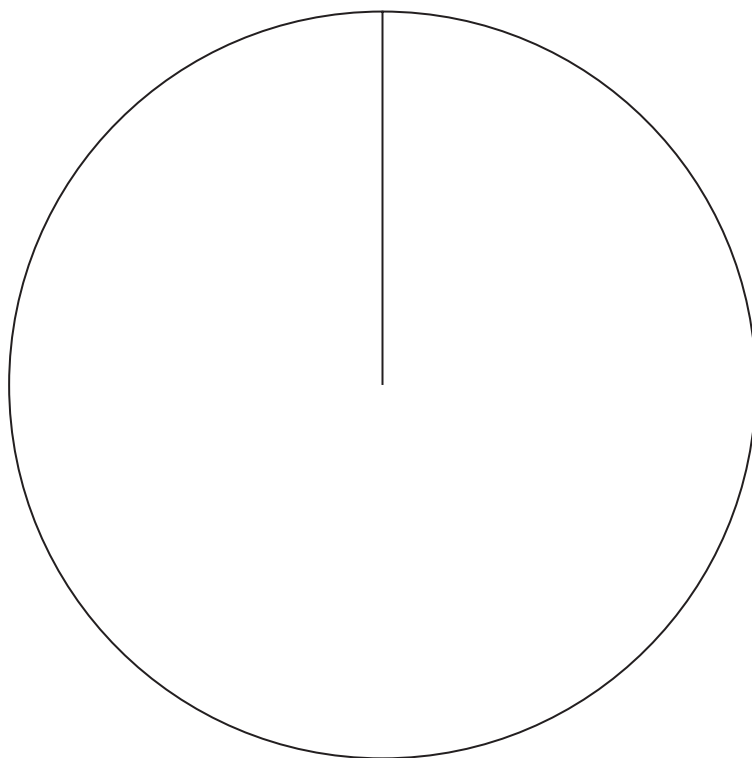
(1)

(Total for Question 13 is 3 marks)

14 Oscar asked each teacher in his school what their favourite type of TV channel is.

Here are his results.

Type of TV channel	Frequency
Sport	8
Movie	22
Documentary	15

Draw an accurate pie chart for this information.

(Total for Question 14 is 3 marks)

Turn over ▶

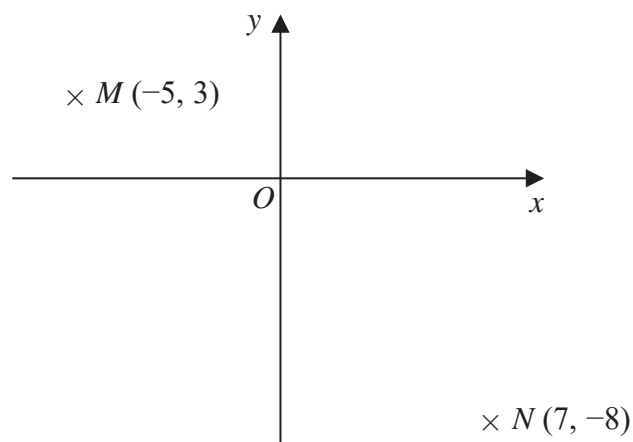**15** 5 large jars of coffee have a total weight of 1250 grams.
2 large jars of coffee and 7 small jars of coffee have a total weight of 1200 grams.

Work out the total weight of 4 small jars of coffee.

.... grams

(Total for Question 15 is 3 marks)

16

Work out the coordinates of the midpoint of *MN*.

(........................ , ...)
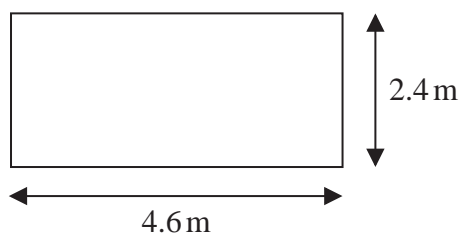
(Total for Question 16 is 2 marks)

17 On the grid, draw the graph of $y = 2x + 4$ for values of x from -3 to 3
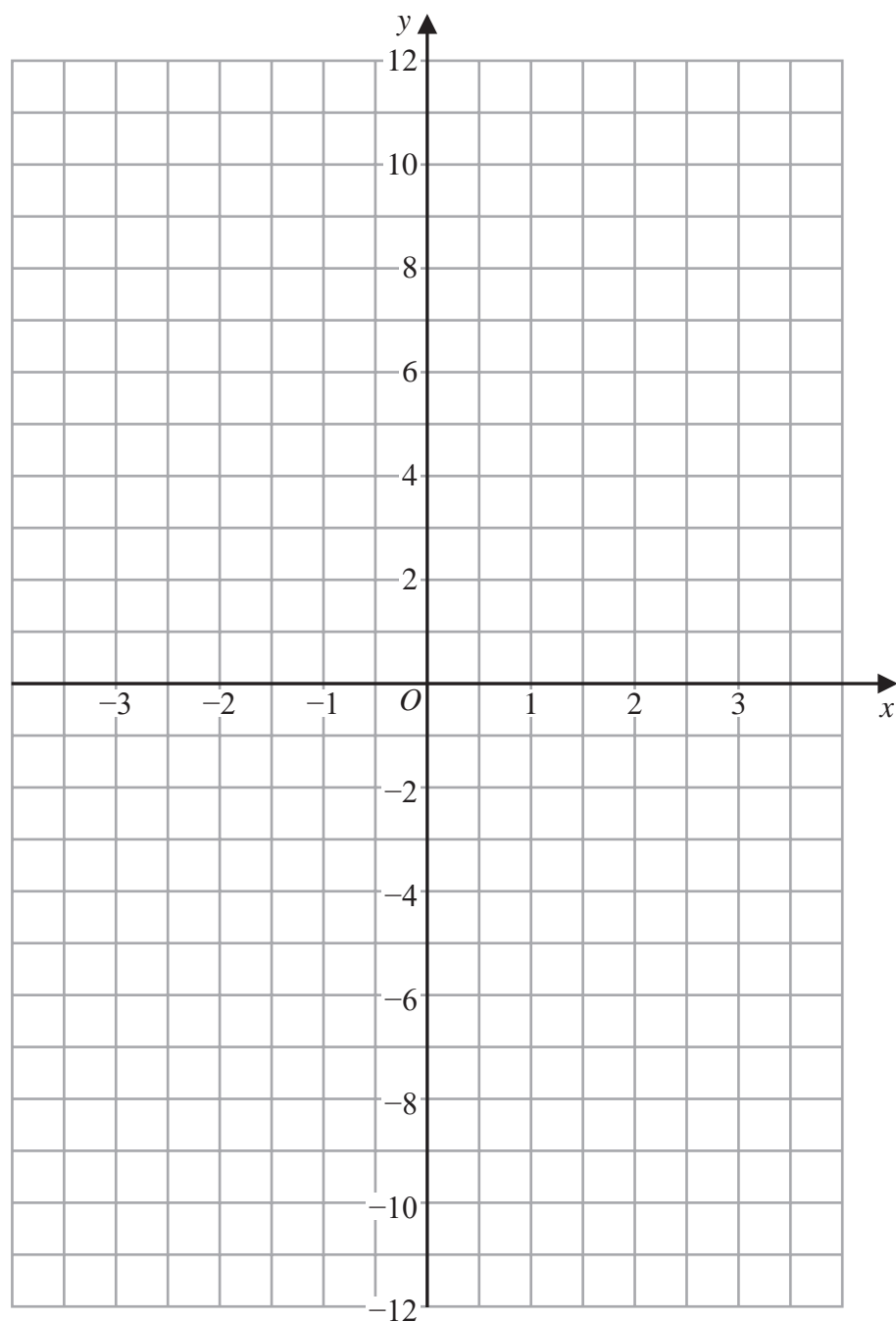
(Total for Question 17 is 3 marks)

S 7 0 4 0 1 A 0 1 1 2 4

18 Macie is going to cover a rectangular wall with tiles.

2.4 m

4.6 m

Tiles are sold in boxes.
Each box of tiles will cover $0.8\,m^2$
Each box of tiles costs £19.95

Macie can only buy whole boxes of these tiles.

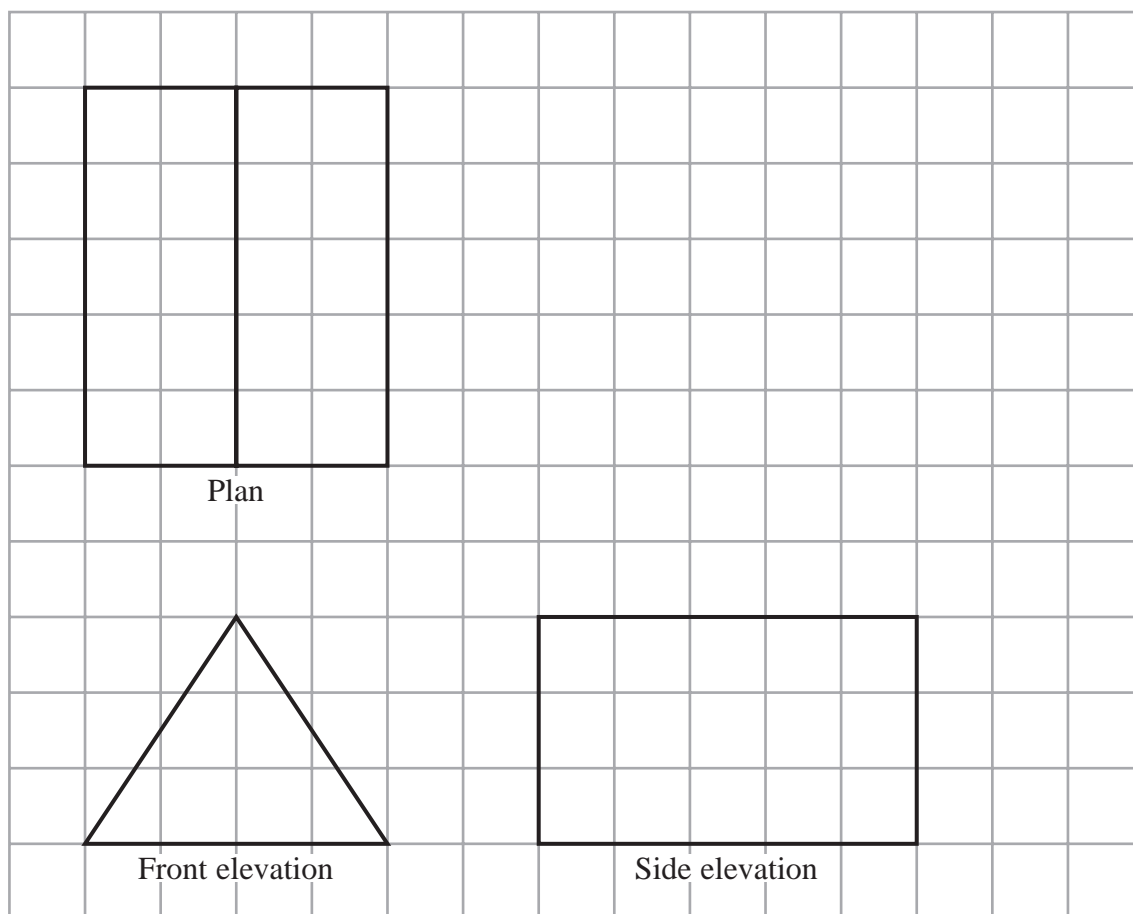Work out the total cost of the boxes of tiles Macie needs to buy.

£...

(Total for Question 18 is 4 marks)

19 The plan, the front elevation and the side elevation of a solid shape are shown on the centimetre grid.

Plan

Front elevation

Side elevation

In the space below, draw a sketch of the solid shape.
Give the dimensions of the solid on your sketch.

(Total for Question 19 is 2 marks)

20 Find the value of the reciprocal of $\dfrac{2}{9}$

....

(Total for Question 20 is 1 mark)

21 (a) Write 152 as a product of its prime factors.

....

(2)

(b) Find the highest common factor (HCF) of 96 and 152

....

(2)

(Total for Question 21 is 4 marks)

22 *x* is an integer such that $5x > 38$

(a) Find the least value of *x*.

....
(2)

(b) Solve $3p - 7 = 5p + 10$

p = ...
(2)

Tammy has been asked to solve the equation $16h^2 = 400$

Here is her working.

$$\sqrt{400} = 20$$

$$20 \div 16 = 1.25$$

Tammy's answer is wrong.

(c) Describe a mistake Tammy has made.

....

....

....

(1)

(Total for Question 22 is 5 marks)

23 Sandro plans to travel to work by train on 20 days next month.

He can buy
      a monthly ticket costing £262
    or 20 separate tickets costing £15.70 each ticket.

What percentage of the total cost of 20 separate tickets does Sandro save by buying a monthly ticket?
Give your answer correct to 1 decimal place.

....%

(Total for Question 23 is 3 marks)

24 (a) Write 174 million in standard form.

....
(2)

Mark is going to put some paper in his printer.

Each sheet of paper is 8.5×10^{-3} cm thick.
The paper tray of Mark's printer has a depth of 30 mm.

(b) Show that Mark can fit more than 350 sheets of paper in the tray.

(2)

(Total for Question 24 is 4 marks)

25 The table shows the probabilities that a biased dice will land on 1, on 2, on 3, on 4, on 5 and on 6

Number on dice	1	2	3	4	5	6
Probability	0.06	0.15	0.32	0.1	0.24	0.13

Sven rolls the biased dice 400 times.

Work out an estimate for the number of times the dice will land on 2 or on 5

....

(Total for Question 25 is 2 marks)

Turn over ▶
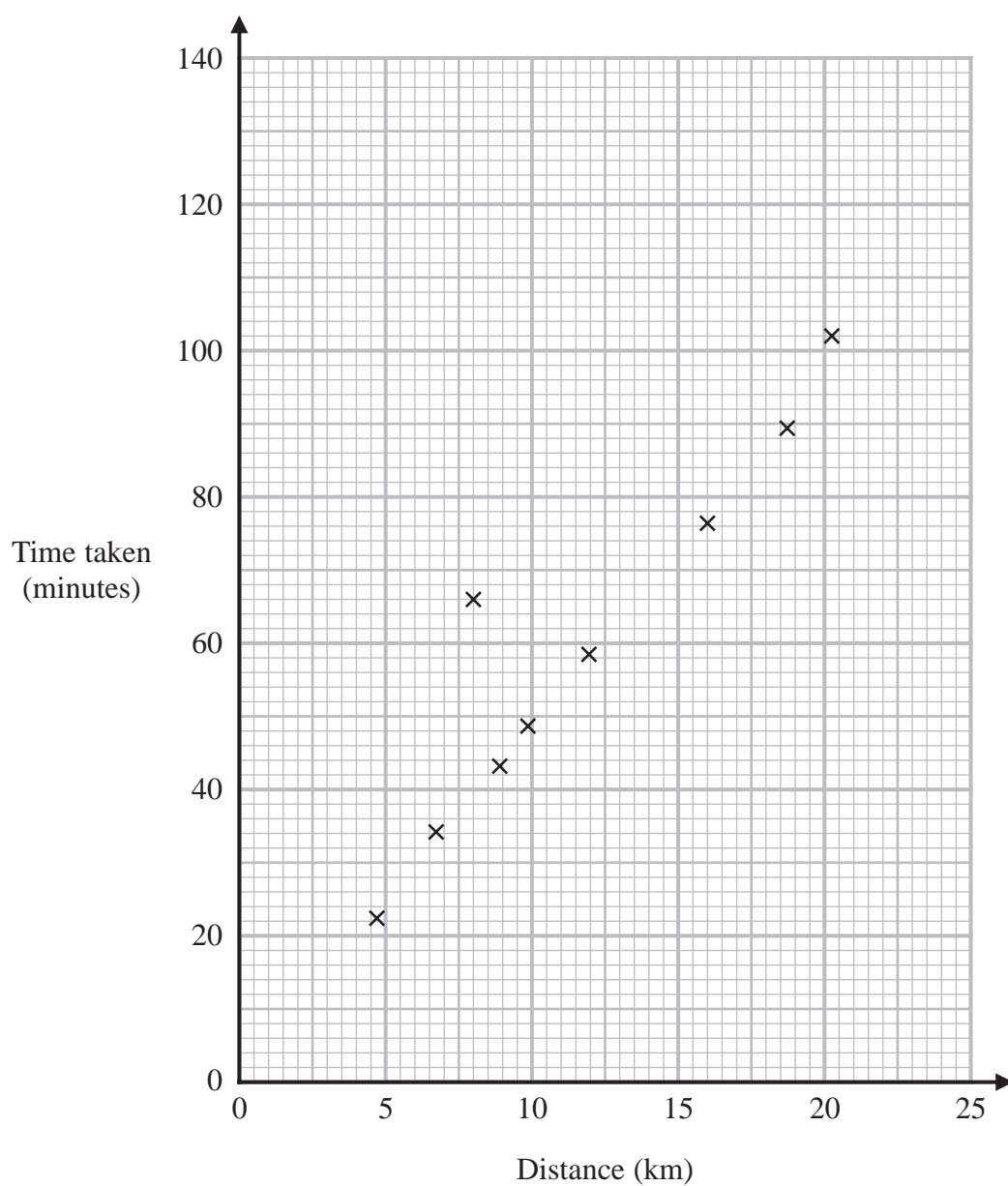
26 Giles is training to take part in a long distance run.
For each training session, he records the distance he ran and the time taken to run that distance.

Giles tries to run at the same speed in each session.

The scatter graph shows information about his results.

On one of Giles' training sessions, he ran at a slower speed than on his other training sessions.

(a) (i) Explain how this can be seen from the scatter graph.

....

....

....

(1)

(ii) On this training session, what distance did Giles run?

.... km

(1)

Ignoring the training session in part (a), the equation of the line of best fit for the other eight results is

$$y = 4.6x + 9 \text{ where } y \text{ minutes is the time taken for Giles to run } x \text{ km.}$$

(b) (i) Write down the gradient of the line of best fit.

....

(1)

(ii) In the table below, put a tick (✓) in the box next to the sentence that describes what the gradient represents.

Giles runs 1 km in 9 minutes	
Giles runs 9 km in 4.6 minutes	
Giles runs 1 km in 4.6 minutes	
Giles runs 4.6 km in 9 minutes	
Giles runs 9 km in 1 minute	
Giles runs 4.6 km in 1 minute	

(1)

(Total for Question 26 is 4 marks)

S 7 0 4 0 1 A 0 1 9 2 4

27 Anaya and Leon each bought a ticket to fly to Poland.
They bought the tickets from different travel companies.

The price of the ticket Anaya bought was $\frac{1}{3}$ less than the normal price of the ticket.

The price that Anaya paid for her ticket was £135

The price of the ticket Leon bought was 40% less than the normal price of the ticket.
The price that Leon paid for his ticket was £126

Anaya says that the normal price of her ticket was less than the normal price of Leon's ticket.

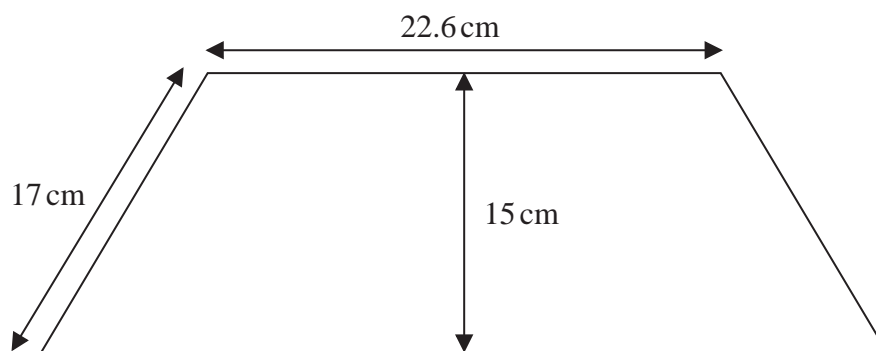Is Anaya correct?
You must show how you get your answer.

(Total for Question 27 is 4 marks)

28 Factorise $x^2 - 9x + 20$

....

(Total for Question 28 is 2 marks)

29 Here is a trapezium with exactly one line of symmetry.

22.6 cm

17 cm

15 cm

Calculate the perimeter of the trapezium.

.... cm

(Total for Question 29 is 4 marks)

TOTAL FOR PAPER IS 80 MARKS

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S 7 0 4 0 1 A 0 2 2 2 4

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S 7 0 4 0 1 A 0 2 3 2 4

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