Centre Number

Candidate Number

Mathematics

Unit T5 Paper 1
(Non-calculator)
Foundation Tier

ML

[GMT51]
WEDNESDAY 13 JANUARY, 9.15 am–10.15 am

TIME

1 hour, plus your additional time allowance.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
You must answer the questions in the spaces provided.
Do not write outside the boxed area on each page, on blank pages or tracing paper.
Complete in blue or black ink only. **Do not write with a gel pen.**
Answer **all eighteen** questions.
All working should be clearly shown in the spaces provided since marks may be awarded for
partially correct solutions.
You **must not** use a calculator for this paper.

INFORMATION FOR CANDIDATES

The total mark for this paper is 50.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to
each question or part question.
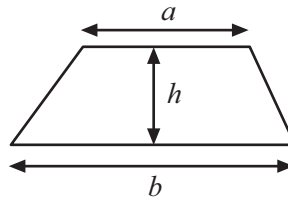Functional Elements will be assessed in this paper.
Quality of written communication will be assessed in Question **12**.
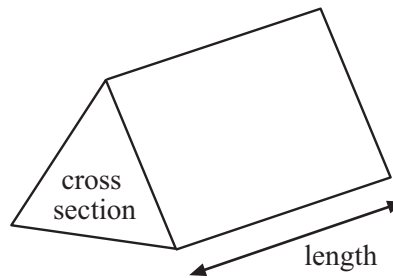You should have a ruler, compasses and a protractor.
The Formula Sheet is on page 2.

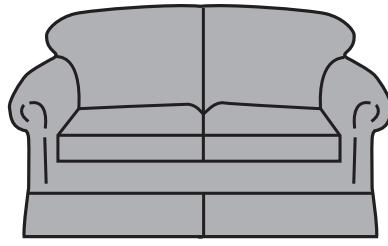# Formula Sheet

Area of trapezium $= \frac{1}{2}(a + b)h$

Volume of prism = area of cross section × length

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(Questions start overleaf)

1

Andy and Bill bought the same type of sofa in two different shops.

Andy paid £180 deposit and £40 per month for 12 months.

Bill made one payment of £600

Who paid less for the sofa and how much less did he pay?

Show your working out.

Answer _____ , £ _____ [4]

2 **(a)** **Estimate** how many clocks costing £6.95 each could be bought for £67.
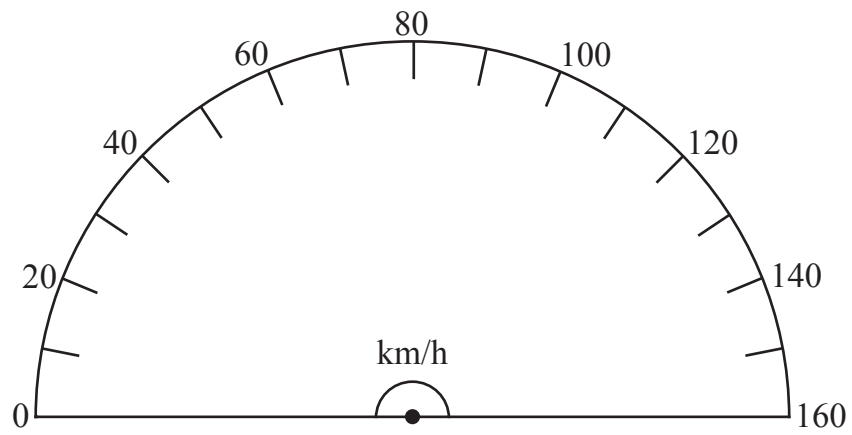
Show your working out.

Answer _____ [2]

(b) **Estimate** the total length of 43 caravans whose average length is 6.7 metres.
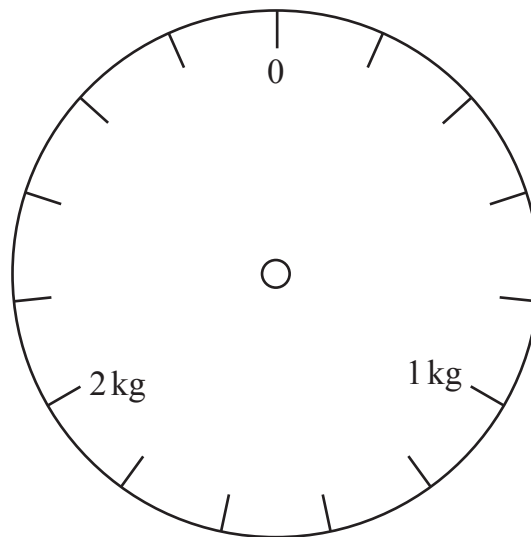
Show your working out.

Answer _____ m [2]

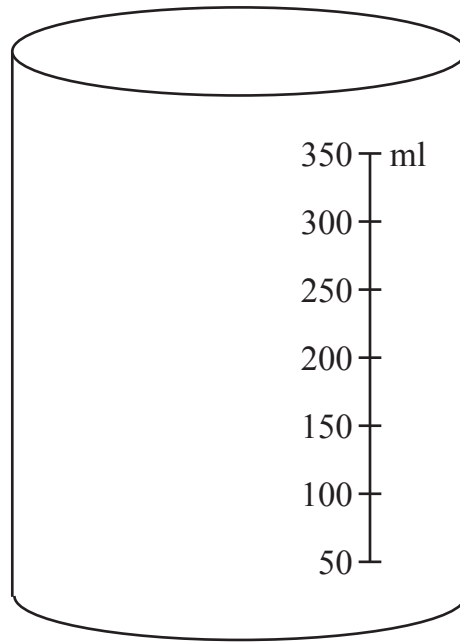**3** **(a)** Draw an arrow to show 55 km/h on the speedometer.

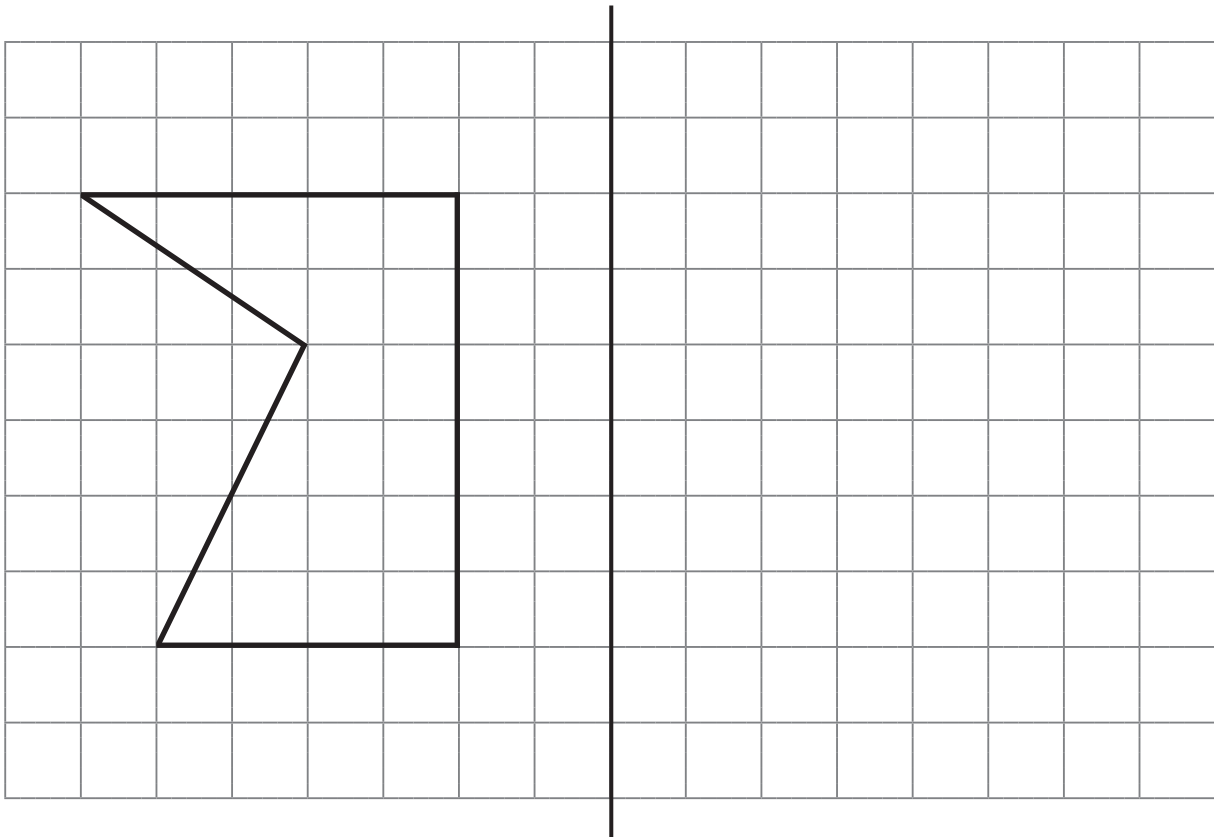
[1]

(b) Draw an arrow to show 600 g on the weighing scale.

[1]

(c) Draw an arrow to show 225 ml on the measuring jug.

350 — ml

300 —

250 —

200 —

150 —

100 —

50 —

[1]

4 On the grid below draw the reflection of the shape in the given line.
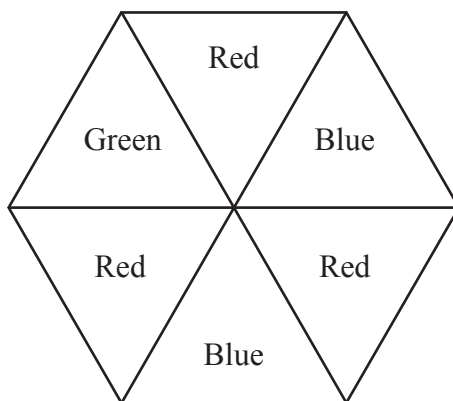
[2]

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(Questions continue overleaf)

5 **(a)** Here is a fair 6-sided spinner.

Jayne will spin this spinner once.

The spinner will land on one of the colours.

Circle the word that best describes the chance of each of the following events.

(i) The spinner will land on Green

impossible   unlikely   even   likely   certain

(ii) The spinner will land on Red

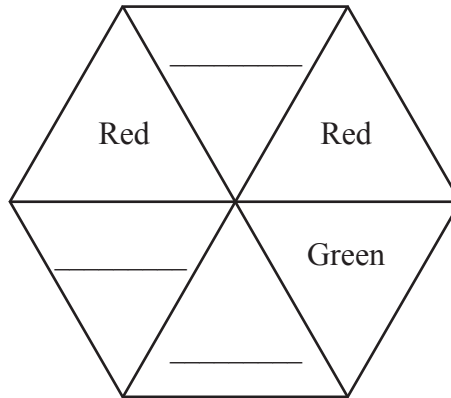impossible   unlikely   even   likely   certain

(iii) The spinner will land on White

impossible   unlikely   even   likely   certain

[3]

(b) Here is a different fair 6-sided spinner.

Wayne will spin this spinner once.

The spinner is more likely to land on Green than to land on Red.

Fill in the missing colours on the spinner above to show how you think this spinner might look. [1]

6   In a raffle all 400 tickets were sold.
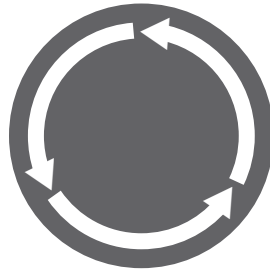
The tickets were numbered from 1 to 400

One ticket is to be drawn at random to win the prize.

What is the probability that the winning ticket will be numbered greater than 275?
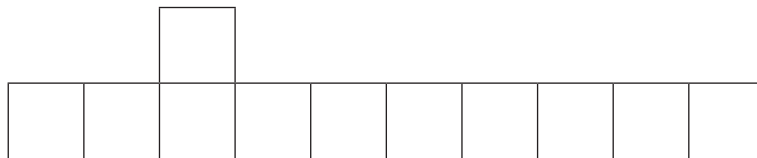
Answer _____ [2]

7

(a) How many lines of symmetry does the sign have?

Answer _____ [1]

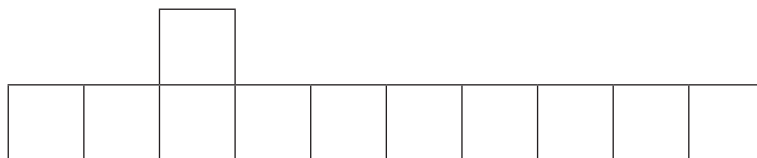**(b)** What is the order of rotational symmetry of the sign?

Answer _____ [1]

8 **(a)** Add one square to the shape below to make a shape with rotational symmetry of order 2

[1]

(b) Add one square to the shape below to make a shape with one line of symmetry.

[1]

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12

9 Calculate

(a) $9 + 6 \div 3$

Answer _____ [1]

(b) $7 + 3(9 - 5)$

Answer _____ [1]

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10 Put brackets in the following statements to make them true.

(a) $7 \times 2 + 9 - 5 = 72$ [1]

(b) $6 - 2 \times 3 + 4 = 28$ [1]

11 Six hundred pupils in a school completed a survey.

The survey was completed by 275 girls.

The survey found that 83 boys were left-handed and that 196 girls were right-handed.

Use this information to complete the two-way table below.

	Boys	Girls
Left-handed		
Right-handed		

[2]

Quality of written communication will be assessed in this question.

12 The petrol consumption of a car is 64 miles to the gallon.

How many miles should the same car do to the litre?

1 gallon = 8 pints. **Show your working clearly.**

Answer _____ [2]

13 (a) Use the formula P = 3Q + 7R to find P when Q = 8 and R = 3

Answer P = _____ [2]

(b) Use the formula V = 3W + 9X to find X when V = 57 and W = 7

Answer X = _____ [3]

(c) $d = \dfrac{e - f}{g}$

Calculate the value of d when $e = -8, f = 12$ and $g = 4$

Answer d = _____ [2]

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14 (a) Write down the reciprocal of 9

Answer _____ [1]

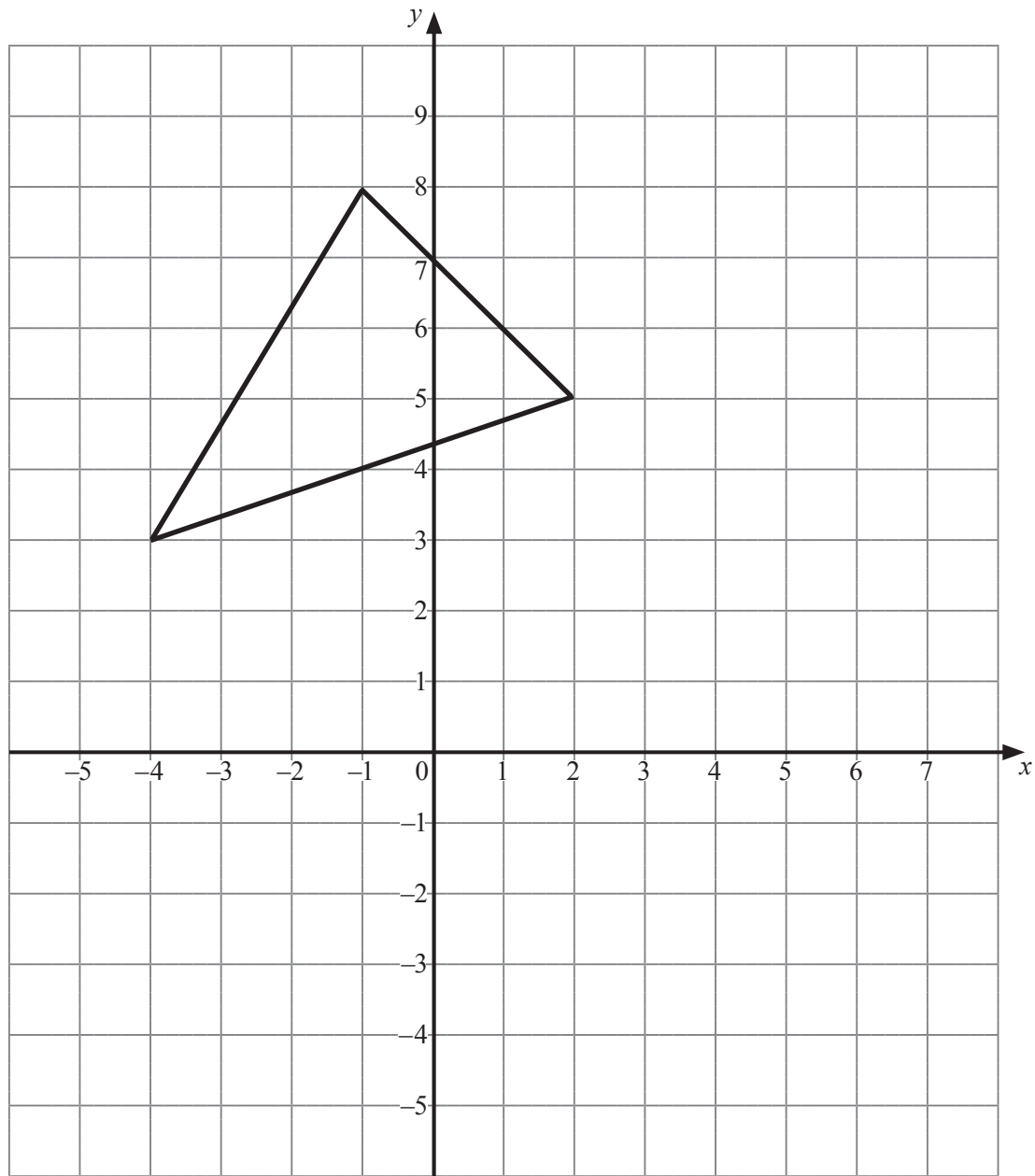**(b)** Calculate $(-42) \div (-6)$

Answer _____ [1]

15 In a game at a fairground, 300 people pay 50p each to play.

Forty of the 300 people each win a prize worth £1.80 There are no other prize-winners.

What profit does the game make?

Answer £ _____ [2]

16

(a) On the diagram above, reflect the given triangle in the line $y = 2$

Label your answer A. [2]

(b) On the same diagram, translate the given triangle by $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$

Label your answer B. [2]

[Turn over

17 Michael tosses a fair coin and rolls a fair 6-sided dice.
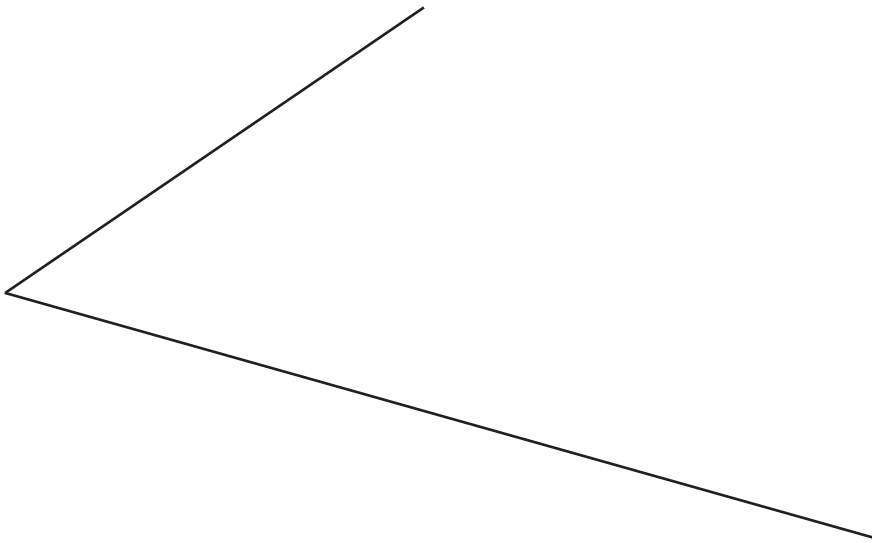
Work out the probability that the outcome is a head and a three.

Show how you found your answer.

Answer _____ [2]

18 Using a ruler and compasses only, construct the bisector of the angle below.

Show all construction lines.

[2]

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