



Surname _____

Other Names _____

Centre Number _____

Candidate Number _____

Candidate Signature _____

**GCSE
MATHEMATICS (LINEAR)**
Foundation Tier Paper 1

F

4365/1F

Wednesday 4 November 2015 Morning

Time allowed: 1 hour 15 minutes

For this paper you must have:

- **mathematical instruments.**

You must NOT use a calculator.

At the top of the page, write your surname and other names, your centre number, your candidate number and add your signature.

[Turn over]



N 0 V 1 5 4 3 6 5 1 F 0 1

INSTRUCTIONS

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer ALL questions.
- You must answer the questions in the spaces provided.
- Do all rough work in this book.

INFORMATION

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 70.
- The quality of your written communication is specifically assessed in Questions 14 and 20. These questions are indicated with an asterisk (*).
- You may ask for more answer paper, tracing paper and graph paper. These must be tagged securely to this answer book.



ADVICE

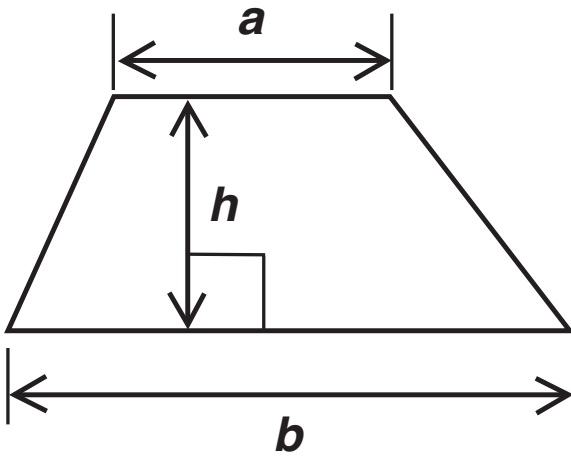
- **In all calculations, show clearly how you work out your answer.**

DO NOT TURN OVER UNTIL TOLD TO DO SO



FORMULAE SHEET: FOUNDATION TIER

AREA OF TRAPEZIUM = $\frac{1}{2} (a+b)h$

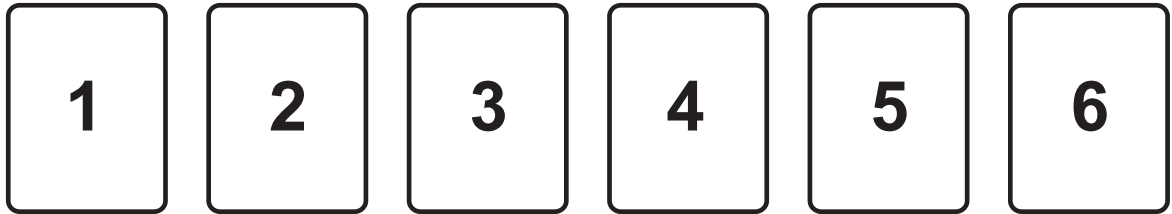


VOLUME OF PRISM = area of cross-section \times length



Answer ALL questions in the spaces provided.

1 Here are some cards.



A card is chosen at random.

Circle the probability word that describes these events.

1 (a) The card shows an odd number. [1 mark]

Impossible

Unlikely

Evens

Likely

Certain

1 (b) The card shows a negative number. [1 mark]

Impossible

Unlikely

Evens

Likely

Certain

1 (c) The card shows a 6 [1 mark]

Impossible

Unlikely

Evens

Likely

Certain

[Turn over]



- 2 Work out $12 \div 1\frac{1}{2}$
[2 marks]

Answer _____

- 3 John buys a magazine for £1.49 and a newspaper for 55p
He pays with a £5 note.

How much change does he get? [2 marks]

Answer £ _____



- 4 Put these numbers in order.
Start with the smallest. [1 mark]

1.04

1.43

1.4

1.34

Answer _____ , _____ , _____ , _____

[Turn over for the next question]



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5 (a) Solve $\frac{w}{2} = 14$ [1 mark]

$w =$ _____

5 (b) Simplify fully $3x + 4 - 5x - 7$ [2 marks]

Answer _____

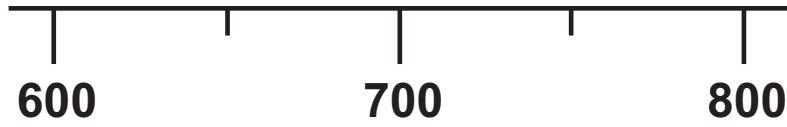
5 (c) Work out the value of $4a + 5b$ when $a = 4$
and $b = 1$ [2 marks]

Answer _____

[Turn over]



- 6 (a) Draw an arrow to show 640 on the scale.
[1 mark]



Here is a table of postage costs.

Mass	Cost of posting
0 – 100 grams	£0.93
101 – 250 grams	£1.24
251 – 500 grams	£1.65
501 – 750 grams	£2.38

6 (b) How much MORE does it cost to post a 640 gram letter than a 64 gram letter? [2 marks]

Answer £ _____

6 (c) How many 150 gram letters can be posted for £10? [2 marks]

Answer _____

[Turn over]

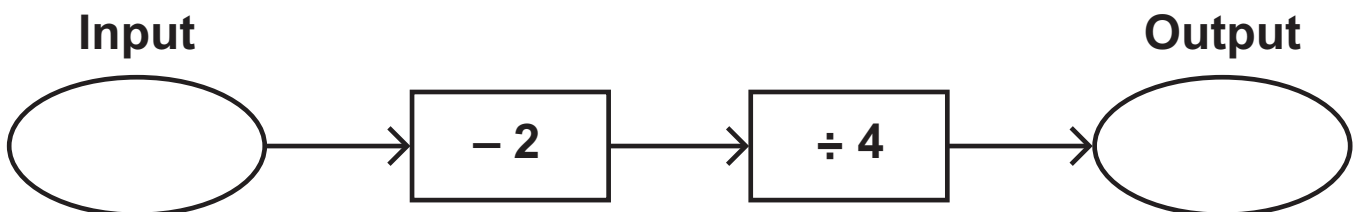


7 Match the name of each shape to a correct property.

One has been done for you. [2 marks]

- Kite • \rightarrow • All sides equal
- Parallelogram • \rightarrow • One line of symmetry
- Rectangle • • All angles equal
- Rhombus • • No lines of symmetry

8 Here is a number machine.



8 (a) Work out the **OUTPUT** when the input is 12
[1 mark]

Answer _____

8 (b) Work out the **INPUT** when the output is -3
[2 marks]

Answer _____

10

[Turn over]



9 Here are five numbers.

7 11 8 12 7

9 (a) Write down the mode. [1 mark]

Answer _____

9 (b) Work out the mean. [2 marks]

Answer _____

10 (a) Circle the TWO values that are less than a half.
[1 mark]

$\frac{1}{2}$

55%

0.45

$\frac{4}{7}$

30%

10 (b) Circle the TWO values that are equal. [1 mark]

$\frac{1}{3}$

20%

0.15

$\frac{1}{5}$

30%

10 (c) Circle the fraction that is recurring when written as a decimal. [1 mark]

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{3}{4}$

$\frac{3}{2}$

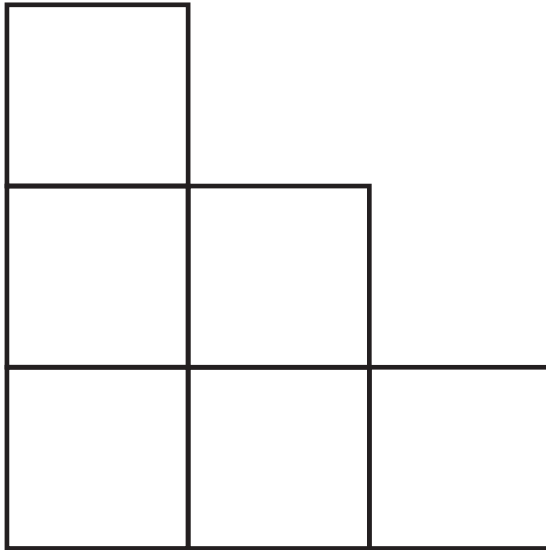
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- 11 Some cubes of side 1 cm are put together to make a solid shape in the form of a prism.
The cross-section of the prism is shown below.
It is not drawn to scale.



The length of the prism is 7 cm.
What is the volume of the shape? [3 marks]

Answer _____

[Turn over]



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12 (a) Circle the TWO prime numbers. [2 marks]

11

21

23

39

45

12 (b) Write down any TWO prime numbers that add up to a cube number. [2 marks]

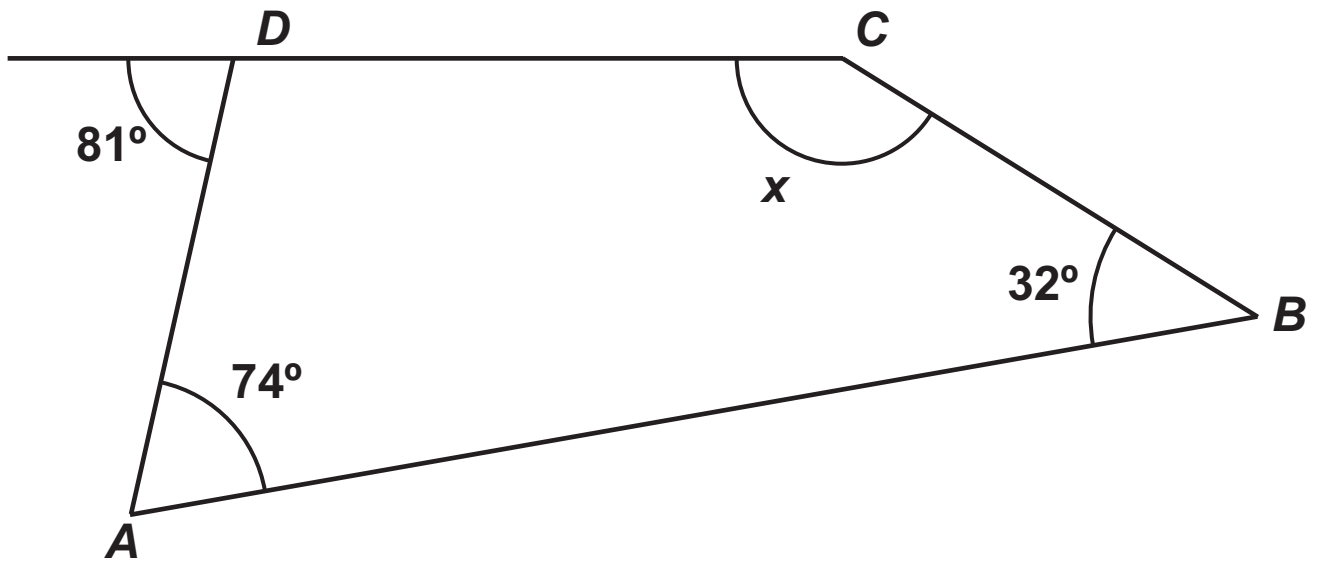
Answer _____ and _____

[Turn over]



- 13 *ABCD* is a quadrilateral. It is not drawn accurately.
The side *CD* is extended.

Work out the size of angle *x*. [3 marks]



Answer _____ degrees

[Turn over for the next question]

7



***14 Three shops sell the same washing machine.**

Shop A £150 deposit plus £60 a month for 6 months

Shop B Usual price £600 20% off

Shop C Usual price £720 $\frac{1}{4}$ off

**In which shop is the washing machine cheapest?
You MUST show your working. [5 marks]**

Answer _____

[Turn over]



- 15 A shape is made from a rectangle R and a square S. They are not drawn accurately.



The shape has a perimeter of 44 cm

The area of the square is 36 cm^2

Work out the area of the shape. [4 marks]

Answer _____ cm^2

9

[Turn over]



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16 (a) Work out $\frac{3}{4} - \frac{1}{3}$ [2 marks]

Answer _____

16 (b) Work out $\frac{1}{3} \times \frac{5}{6} \times \frac{9}{10}$

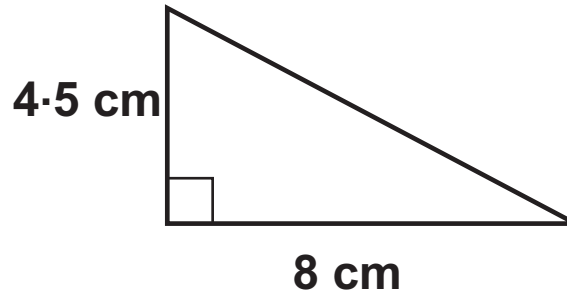
Give your answer in its simplest form. [3 marks]

Answer _____

[Turn over]

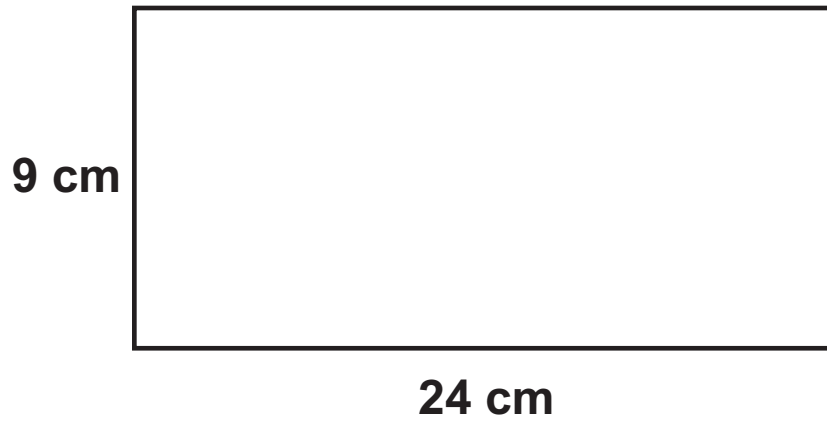


- 17 Here is a right-angled triangle. It is not drawn accurately.



- 17 (a) Show that the area of this triangle is 18 cm^2
[1 mark]

17 (b) Here is a rectangle. It is not drawn accurately.



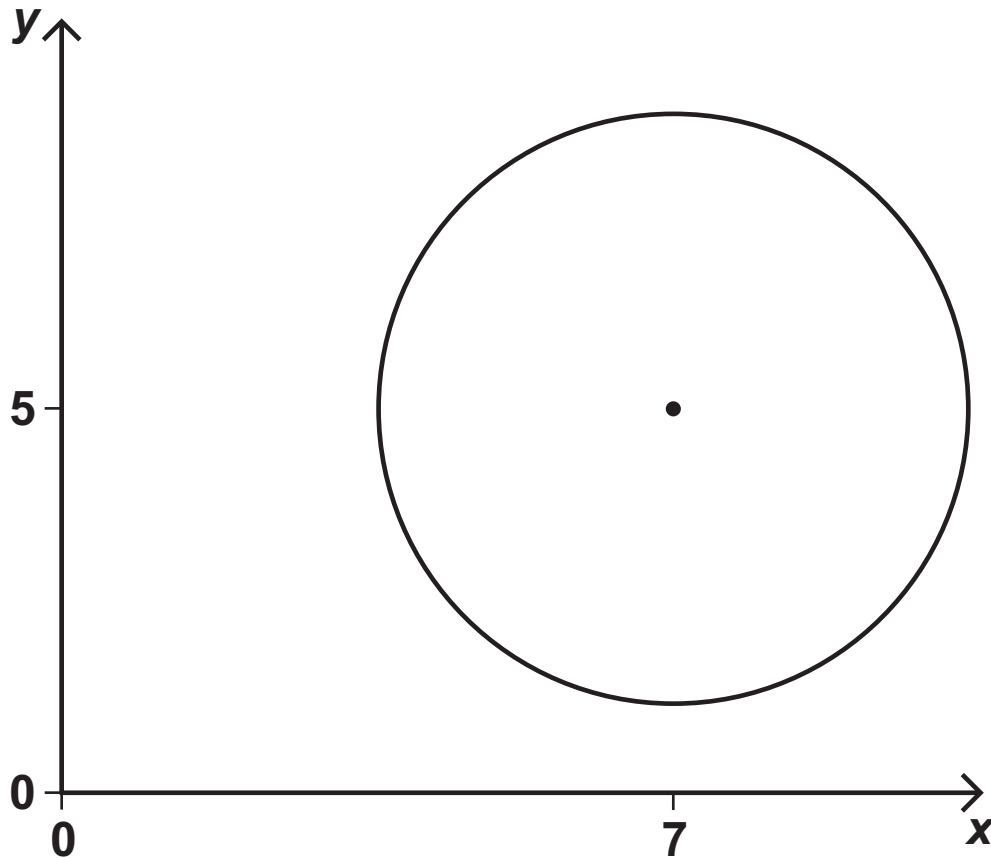
How many of the right-angled triangles from part (a), will fit in the rectangle? [3 marks]

Answer _____

[Turn over]



- 18 A circle radius 3 units, centre (7, 5) is shown. It is not drawn accurately.



Work out the coordinates of ANY point that lies on the circumference of the circle.
You **MUST** show your working, which may be on the diagram. [2 marks]

Answer (_____ , _____)

19 Divide 270 in the ratio 3 : 2 : 1 [3 marks]

Answer _____ : _____ : _____

[Turn over for the next question]



20 Fay is testing an ordinary six-sided dice to see if it is biased.

She throws the dice 120 times.

20 (a) Work out the number of times the dice is expected to land on 1 [1 mark]

Answer _____

*20 (b) Here are the actual results.

Number on dice	1	2	3	4	5	6	Total
Frequency	5	19	17	20	21	38	120

Is the dice biased?

Tick a box.

Yes No Cannot tell

Give a reason for your answer. [2 marks]

[Turn over]



21 These expressions represent four numbers.

$$2x + 2$$

$$3x - 1$$

$$4x - 6$$

$$5x + 2$$

The sum of the first two expressions is 36

Work out the value of the median of the four numbers. [5 marks]

Answer _____

5

END OF QUESTIONS



THERE ARE NO QUESTIONS PRINTED ON THIS PAGE

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