

Please check the examination details below before entering your candidate information

Candidate surname		Other names	
Centre Number		Candidate Number	

Pearson Edexcel International GCSE (9-1)

Thursday 15 May 2025

Morning (Time: 2 hours)

Paper reference **4WM1F/01**

Mathematics A (Modular)

UNIT 1F

Foundation Tier

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.
- Without sufficient working, correct answers may be awarded no marks.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- **Calculators may be used.**
- You must **NOT** write anything on the formulae page.
- Anything you write on the formulae page will gain NO credit.

Information

- The total mark for this unit is 100.
- 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.
- Check your answers if you have time at the end.

Turn over ►

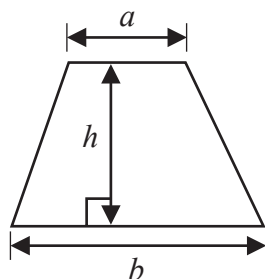
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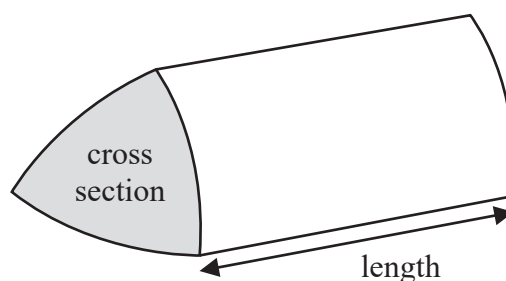



Pearson

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

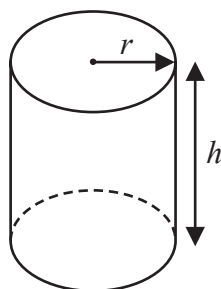


Volume of prism = area of cross section $\times$ length



Volume of cylinder = $\pi r^2 h$

Curved surface area of cylinder = $2\pi r h$



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Answer ALL TWENTY EIGHT questions.

Write your answer in the spaces provided.

You must write down all the stages in your working.

- 1 Write a number in each box so that each calculation is correct.

(a) $475 + \boxed{} = 1200$

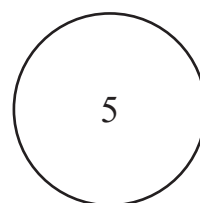
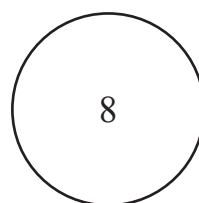
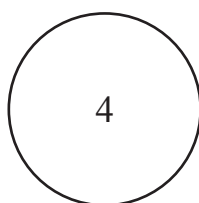
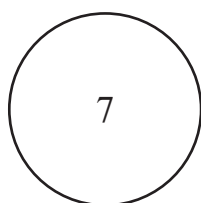
(1)

(b) $180 \times \boxed{} = 5760$

(1)

Here are four discs.

There is a number on each disc.



Using each disc only once,

- (c) (i) write down the smallest number that can be made,

.....
(1)

- (ii) write down the largest **even** number that can be made.

.....
(1)

(Total for Question 1 is 4 marks)

2 There are 10 buttons in a bag.

5 of the buttons are green

2 of the buttons are pink

3 of the buttons are yellow

impossible

unlikely

evens

likely

certain

Mick takes at random a button from the bag.

Write down the word from the box that best describes the likelihood that Mick takes a

(i) blue button

.....

(ii) green button

.....

(iii) pink button

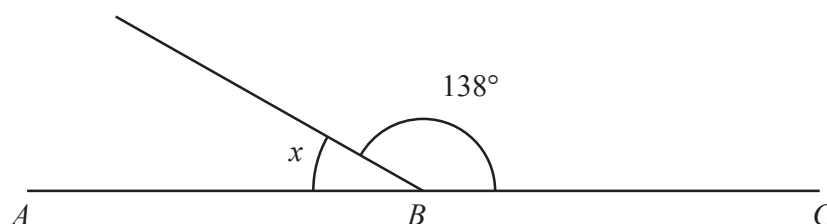
.....

(Total for Question 2 is 3 marks)



3 ABC is a straight line.

Diagram **NOT**
accurately drawn



(a) Work out the size of angle x

.....
(1)

(b) Circle the correct mathematical name for an angle that measures 138°

right-angle obtuse reflex acute

(1)

(c) Write down the mathematical name for a polygon with 8 sides.

.....
(1)

(d) Change 5300 grams into kilograms.

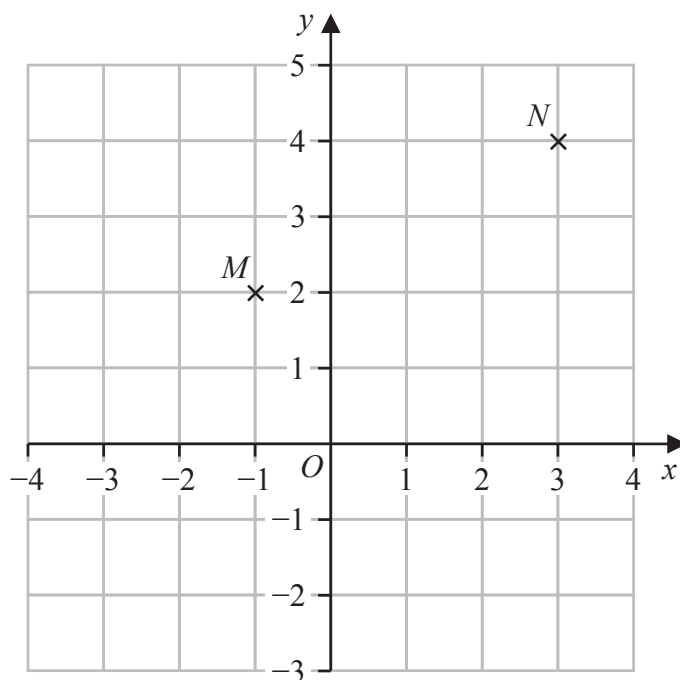
..... kilograms
(1)

(e) Change 4.7 metres into centimetres.

..... centimetres
(1)

(Total for Question 3 is 5 marks)

- 4 The diagram shows two points, M and N , marked on a grid.



- (a) Write down the coordinates of point M

(.....,)
(1)

- (b) Find the coordinates of the midpoint of MN

(.....,)
(2)

The coordinates of point P are $(3, -2)$

- (c) On the grid, mark with a cross ($\times$) the position of P
Label the cross P

(1)

(Total for Question 4 is 4 marks)

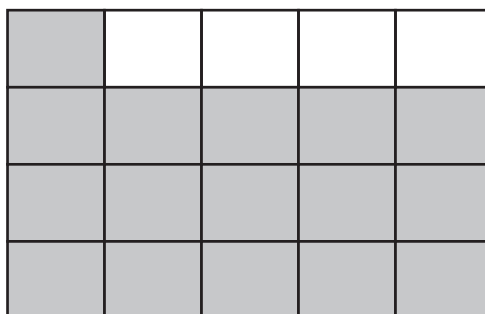


5 (a) Write 0.6 as a percentage.

..... %
(1)

(b) Write $\frac{19}{100}$ as a decimal.

.....
(1)



(c) What fraction of this shape is shaded?
Write your fraction in its simplest form.

.....
(2)

(Total for Question 5 is 4 marks)

6 (a) Solve $4x = 24$

$$x = \dots\dots\dots (1)$$

(b) Solve $y - 30 = 18$

$$y = \dots\dots\dots (1)$$

(Total for Question 6 is 2 marks)



7 The normal price of a calculator is £26.80

Amy gets $\frac{1}{4}$ off the normal price with her student discount card.

Amy buys 2 of these calculators.
She pays with a £50 note.

How much change should Amy receive?

£.....

(Total for Question 7 is 4 marks)

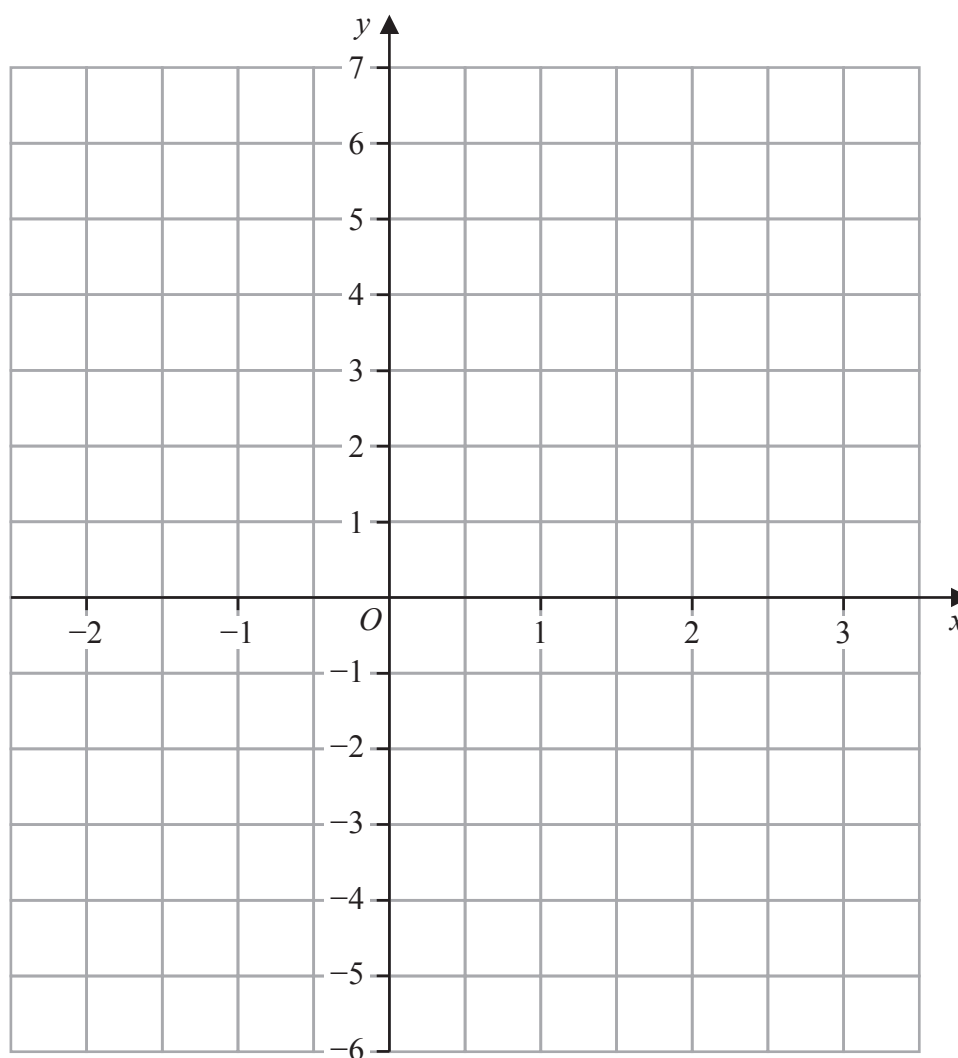


- 8 (a) Complete the table of values for $y = 2x - 1$

x	-2	-1	0	1	2	3
y			-1			5

(2)

- (b) On the grid, draw the graph of $y = 2x - 1$ for values of x from -2 to 3



(2)

(Total for Question 8 is 4 marks)



- 9 The diagram shows kite $ABCD$ where $AB = AD$ and $BC = DC$

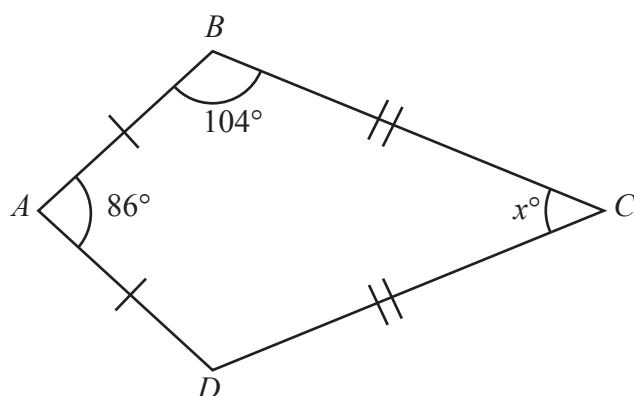


Diagram **NOT**
accurately drawn

- (a) Work out the value of x

$$x = \dots\dots\dots (2)$$

The diagram shows isosceles triangle EFG where $EG = EF$

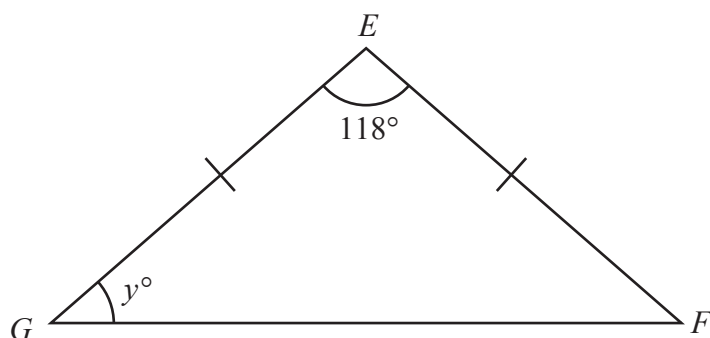


Diagram **NOT**
accurately drawn

- (b) Work out the value of y

$$y = \dots\dots\dots (2)$$

(Total for Question 9 is 4 marks)

10 (a) Write 17 as a percentage of 25

..... %
(1)

(b) Write these fractions in order of size.
Start with the smallest fraction.

$$\frac{4}{5} \quad \frac{3}{4} \quad \frac{7}{10} \quad \frac{5}{8} \quad \frac{13}{20}$$

.....
(2)

(c) Write one pair of brackets in this calculation so that the answer is correct.

$$3 + 1 + \frac{1}{8} + \frac{3}{8} \div \frac{1}{2} = 5$$

(1)

(Total for Question 10 is 4 marks)



- 11 Ally buys one drink and one cake.

For the drink, she chooses from coffee (C) or tea (T) or water (W)

For the cake, she chooses from eclair (E) or sponge (S) or gateau (G)

Write down all the possible combinations Ally can buy.

.....

.....

.....

(Total for Question 11 is 2 marks)

- 12 Use your calculator to work out the value of

$$\frac{7.8 + 2.3^2}{5.92 - 4.1}$$

Give your answer as a decimal.

Write down all the figures on your calculator display.

.....

(Total for Question 12 is 2 marks)



13 Show that $\frac{3}{7} + \frac{1}{4} = \frac{19}{28}$

(Total for Question 13 is 2 marks)

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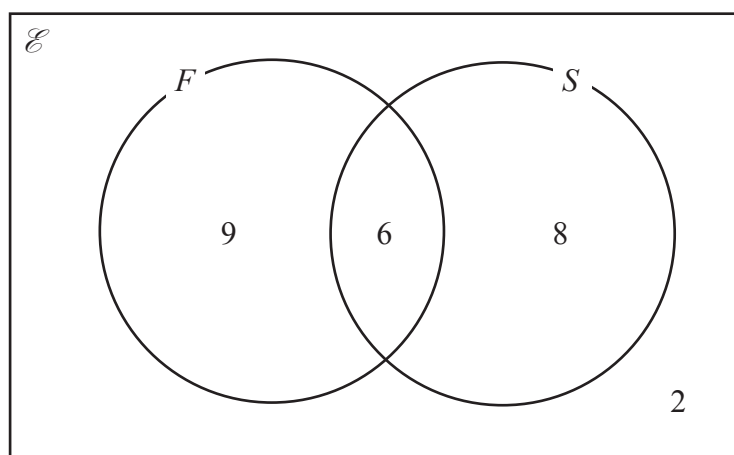
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14 Some students were asked if they study French (F) or Spanish (S)

The Venn diagram gives information about the results.
The values shown represent numbers of students.



(a) How many of these students study only French or only Spanish?

.....
(1)

One of these students is chosen at random.

(b) Find the probability that this student studies both French and Spanish.

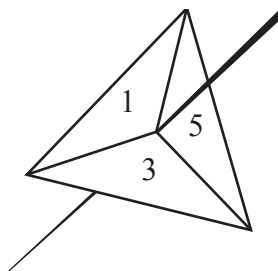
.....
(2)

(Total for Question 14 is 3 marks)

15 Harry has a fair 6-sided dice and a fair 3-sided spinner.

The dice can land on 1 or 2 or 3 or 4 or 5 or 6

The spinner can land on 1 or 3 or 5



Harry throws the dice once and spins the spinner once.

He adds the number that the dice lands on to the number that the spinner lands on to get his score.

- (a) Complete the table to show all possible scores.
Twelve of the scores have been done for you.

		Dice					
		1	2	3	4	5	6
Spinner	1	2	3			6	7
	3	4			7	8	9
	5			8	9	10	11

(2)

- (b) Find the probability that Harry's score is

- (i) greater than 8

(1)

- (ii) either 5 or 7

(1)

(Total for Question 15 is 4 marks)



16 (a) Factorise $9e + 12g$

.....
(1)

(b) Expand and simplify $x(x + 5) + 3(2x - 4)$

.....
(2)

(Total for Question 16 is 3 marks)

17 A plane flies from London to New York.
The plane flies a distance of 5560 kilometres in 8 hours.
Work out the average speed of the plane.

..... kilometres per hour

(Total for Question 17 is 2 marks)

18 The diagram shows the plan of a stage.

The stage is made up of a rectangle and an isosceles triangle.

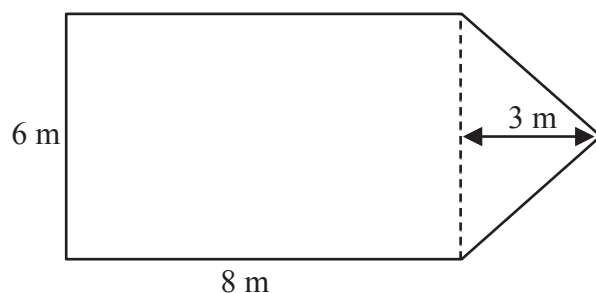


Diagram **NOT**
accurately drawn

Yuko is going to cover the stage with varnish.

She needs to buy enough tins of varnish to cover the stage with one coat of varnish.

Each tin of varnish covers an area of 4 m^2

Work out the smallest number of tins of varnish that Yuko needs to buy.

Show your working clearly.

(Total for Question 18 is 4 marks)

19 Without using a calculator, work out

$$3\frac{2}{3} \times 2\frac{4}{7}$$

Show each stage of your working.

Give your answer as a mixed number in its simplest form.

(Total for Question 19 is 3 marks)



20 The height of a tree is 17.8 metres correct to one decimal place.

- (a) Write down the lower bound for the height of the tree.

..... metres
(1)

The weight of an apple is 145 grams correct to the nearest 5 grams.

- (b) Write down the upper bound for the weight of the apple.

..... grams
(1)

$$A = \frac{4.766 \times 815}{0.399}$$

- (c) By rounding each number to one significant figure, work out an estimate for the value of A
Show your working clearly.

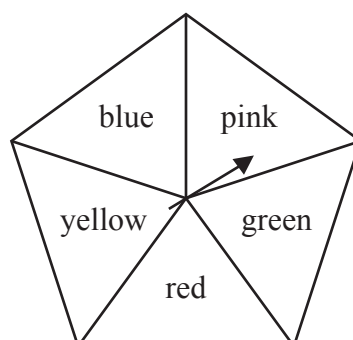
.....
(2)

(Total for Question 20 is 4 marks)



21 Here is a biased spinner.

The spinner can land on pink or on green or on red or on yellow or on blue.



The table gives information about the probability that, when the spinner is spun, it will land on each colour.

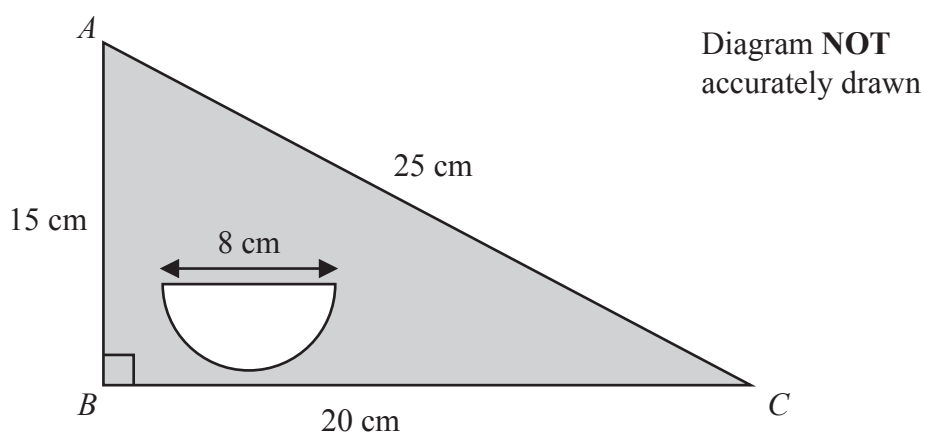
Colour	pink	green	red	yellow	blue
Probability	0.14	0.23	$2x$	0.18	$7x$

Jim is going to spin the spinner 500 times.

Work out the expected number of times the spinner will land on blue.

(Total for Question 21 is 4 marks)

22 The diagram shows triangle ABC and a semicircle.



$$AB = 15 \text{ cm} \quad BC = 20 \text{ cm} \quad AC = 25 \text{ cm} \quad \text{angle } ABC = 90^\circ$$

The diameter of the semicircle is 8 cm

Work out the area of the region shown shaded in the diagram.
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 22 is 3 marks)



23 $x^5 \times x^7 = x^m$

(a) Find the value of m

$$m = \dots\dots\dots (1)$$

$$y^8 \div y^3 = y^n$$

(b) Find the value of n

$$n = \dots\dots\dots (1)$$

(c) Simplify fully $(5a^4r^2)^3$

$$\dots\dots\dots (2)$$

(Total for Question 23 is 4 marks)



24 The diagram shows a block in the shape of a cuboid.

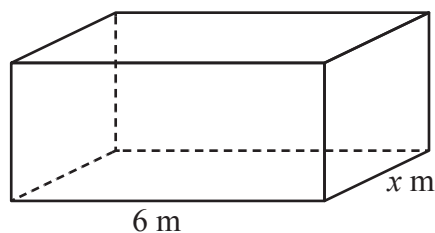


Diagram **NOT**
accurately drawn

The block has a horizontal base with length 6 m and width x m

The block is placed on a table so that the whole of its horizontal base is in contact with the table.

The block exerts a force of 702 newtons on the table.

The pressure on the table due to the block is 65 newtons/m²

Work out the value of x

$\text{pressure} = \frac{\text{force}}{\text{area}}$
--

$x =$

(Total for Question 24 is 3 marks)

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25 (a) Solve $x - 4 = \frac{3 + 2x}{6}$

Show clear algebraic working.

$$x = \dots\dots\dots (3)$$

(b) (i) Factorise $y^2 - 11y + 30$

$$\dots\dots\dots (2)$$

(ii) Hence solve $y^2 - 11y + 30 = 0$

$$\dots\dots\dots (1)$$

(Total for Question 25 is 6 marks)



26 $\mathcal{E} = \{18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30\}$

$$A = \{\text{even numbers}\}$$

$$B = \{\text{multiples of 3}\}$$

$$C = \{\text{multiples of 5}\}$$

(a) List the members of the set $(A \cup B)'$

(2)

Sophie writes down the statement $B \cap C = \emptyset$

(b) Explain why Sophie's statement is wrong.

(1)

D is a set such that $A \cap D = \{18, 26\}$

The set D has exactly 5 members.

(c) List the members of one possible set D

(2)

(Total for Question 26 is 5 marks)



27 $7^x = 1$

(a) Write down the value of x

$$x = \dots\dots\dots (1)$$

$$\frac{8^{-4} \times 8^{11}}{8^{12}} = 8^n$$

(b) Work out the value of n

$$n = \dots\dots\dots (2)$$

(Total for Question 27 is 3 marks)

Turn over for Question 28



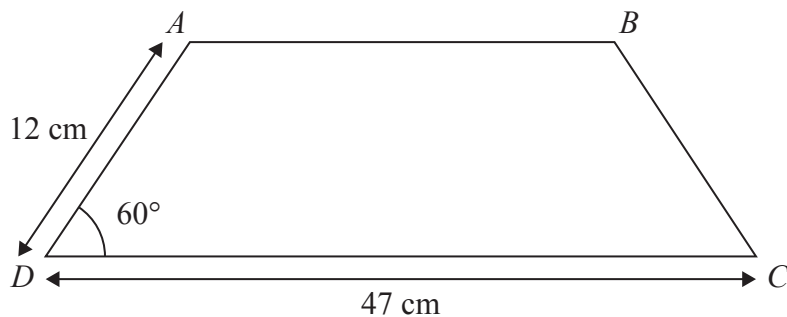


Diagram **NOT**
accurately drawn

$ABCD$ is a trapezium with one line of symmetry.

$$\text{angle } ADC = 60^\circ \quad AD = 12\text{ cm} \quad DC = 47\text{ cm}$$

Work out the area of the trapezium.

Give your answer correct to 3 significant figures.

Show your working clearly.

..... cm^2

(Total for Question 28 is 5 marks)

TOTAL FOR UNIT IS 100 MARKS

