Candidate surname

Other names

**Pearson Edexcel
International GCSE**

Centre Number

Candidate Number

Thursday 6 June 2019

| Morning (Time: 2 hours) | Paper Reference **4MA1/2FR** |

Mathematics A
**Level 1/2
Paper 2FR
Foundation Tier**

You must have:
Ruler graduated in centimetres and millimetres, protractor, 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 paper 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 ▶

Pearson

Formulae sheet – Foundation Tier

Area of trapezium $= \frac{1}{2}(a + b)h$
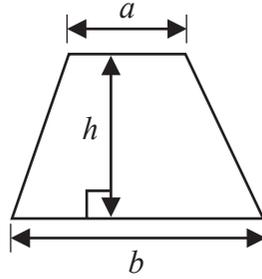
Volume of prism = area of cross section × length
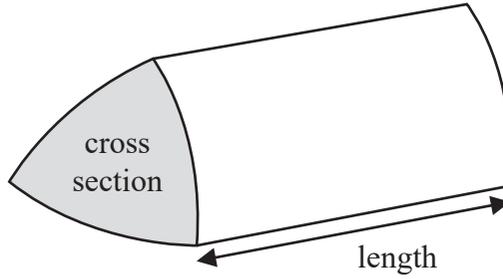
Volume of cylinder $= \pi r^2 h$

Curved surface area of cylinder $= 2\pi rh$
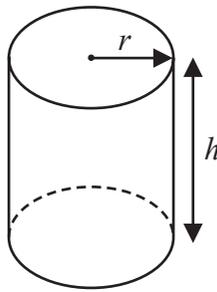
Answer ALL TWENTY SEVEN questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 The table shows the distance, in kilometres, from London to each of five cities.

City	Distance (km)
Rio de Janeiro	9280
New York	5567
Manila	10 734
Sydney	16 983
Kolkata	7962

(a) Write the number 9280 in words.

....

(1)

(b) Which of the five cities is nearest to London?

....

(1)

(c) Write down the value of the 7 in 10 734

....

(1)

(d) Which of the five cities is **seven thousand nine hundred and sixty two** kilometres from London?

....

(1)

(e) Write the number 16 983 correct to the nearest thousand.

....

(1)

(Total for Question 1 is 5 marks)

2 The pictogram shows information about the number of naan breads sold in a restaurant each day from Wednesday to Saturday.

Wednesday	⊕ ⊕ ⊕
Thursday	⊕ ⊕ ⊝
Friday	⊕ ⊕
Saturday	⊕ ⊕ ⊕ ◿
Sunday	

represents 8 naan breads
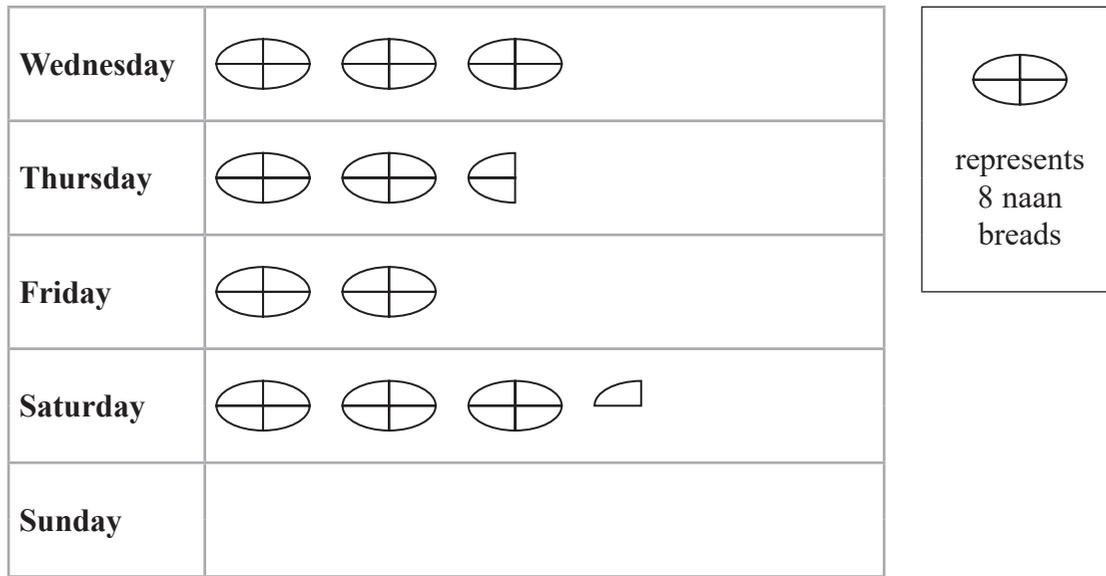
(a) How many naan breads were sold on Wednesday?

....

(1)

More naan breads were sold on Saturday than were sold on Friday.

(b) How many more?

....

(2)

12 naan breads were sold in the restaurant on Sunday.

(c) Show this information on the pictogram.

(1)

The manager of the restaurant says,

   "More than 100 naan breads were sold in the restaurant from Wednesday to Sunday."

(d) Is the manager correct?
    You must show your working.

....

(2)

(Total for Question 2 is 6 marks)

3 Here is a pentagon.
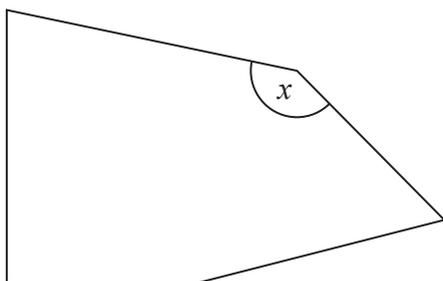
| acute | obtuse | reflex | right |

(a) Write down the word from the box that describes the angle marked x.

.... angle

(1)

(b) Write down the mathematical name of the following polygon.

..

(1)
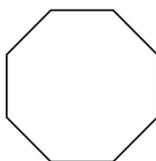
(Total for Question 3 is 2 marks)

4 Imran throws an ordinary fair dice.

(a) On the probability scale, mark with a cross (✕) the probability that the dice will land on 10

0   0.5   1
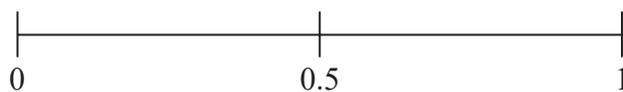
(1)

(b) On the probability scale, mark with a cross (✕) the probability that the dice will land on an odd number.

0   0.5   1

(1)
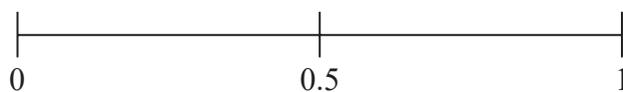
(Total for Question 4 is 2 marks)

5 Here is a list of eight numbers.

| 10   23   27   30   42   52   74   81 |

From the list, write down

(i) a square number

....

(ii) a factor of 50

....

(iii) a prime number.

....

(Total for Question 5 is 3 marks)

6 (a) Work out the value of $\dfrac{9.24 \times 4.35}{6.57 + 2.19}$

Give your answer as a decimal.
Write down all the figures on your calculator display.

....

(2)

(b) Give your answer to part (a) correct to 2 significant figures.

....

(1)

(Total for Question 6 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

7
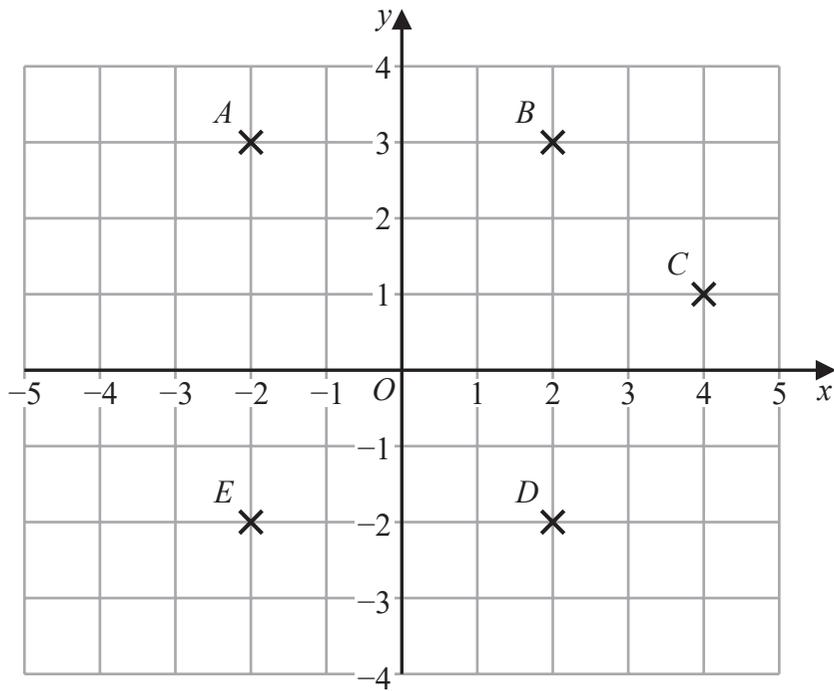
(a) Write down the coordinates of point *B*.

(.................... , ...)

(1)

(b) Write down the letter of the point with coordinates $(2 , -2)$

....

(1)

(c) Find the coordinates of the midpoint of *AC*.

(.................... , ...)

(2)

(Total for Question 7 is 4 marks)

8 Sandeep has 1200 rupees to spend on pencils.
Each pencil costs 45 rupees.

Sandeep buys as many pencils as he can.

Work out how much change Sandeep should get.

.... rupees

(Total for Question 8 is 3 marks)

9 Anjali travels from Beijing to Shanghai by train.

The train leaves Beijing at 07 25
The train arrives in Shanghai at 13 15 the same day.

Work out how long the train takes to travel from Beijing to Shanghai.
Give your answer in hours and minutes.

.... hours .... minutes

(Total for Question 9 is 2 marks)

10 The diagram shows kite *ABCD*.
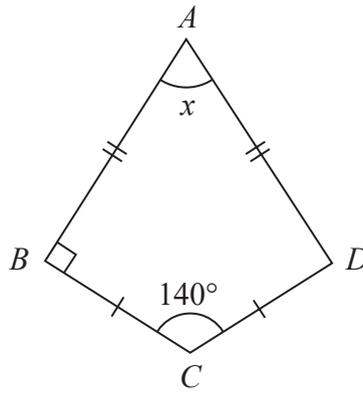
Diagram **NOT**
accurately drawn

(a) Work out the size of the angle marked *x*.

.... °

(2)

The diagram shows kite *PQRS*.
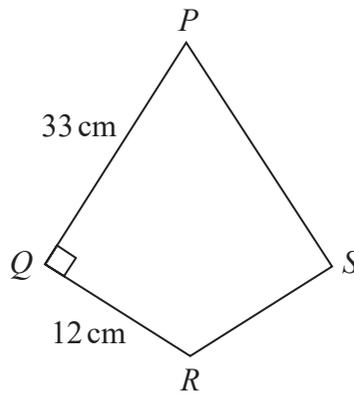
Diagram **NOT**
accurately drawn

(b) Work out the area of kite *PQRS*.

.... cm^2

(2)

(Total for Question 10 is 4 marks)

Turn over ▶

11 Karl has 5700 bricks.
He wants to put all the bricks into crates.

Diagram **NOT** accurately drawn

5 cm

9 cm

3 cm
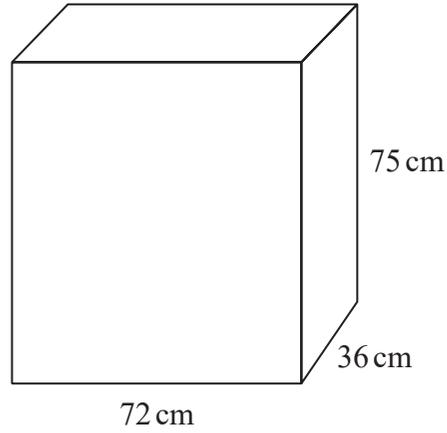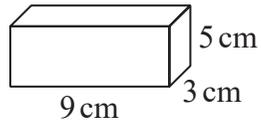
75 cm

36 cm

72 cm

Each brick is a cuboid measuring 9 cm by 3 cm by 5 cm.
Each crate is a cuboid measuring 72 cm by 36 cm by 75 cm.

Karl has 4 crates.

Is there enough room in the 4 crates for 5700 bricks?
Show your working clearly.

(Total for Question 11 is 4 marks)

12 Ravina counts the number of matches in each of 40 boxes of matches.
The table shows information about her results.

Number of matches	Frequency
21	13
22	8
23	8
24	6
25	5

(a) Find the median of the numbers of matches in the boxes.

....

(2)

(b) Work out the mean number of matches.

....

(3)

(Total for Question 12 is 5 marks)

Turn over ▶

13 (a) Solve $3f - 5 = 11$

$f =$ ....
(2)

(b) Expand $w(w + 3)$

....
(1)

$y = 5e^2 + 20$

(c) Work out the value of y when $e = -3$

$y =$ ....
(2)

(d) Factorise $x^2 - 5x - 36$

....
(2)

(Total for Question 13 is 7 marks)

14 Maria is going to make blackcurrant pies.
Here is a list of ingredients to make 6 blackcurrant pies.

> **Blackcurrant pies**
> Ingredients for 6 pies
>
> 150 g flour
> 420 g blackcurrants
> 170 g sugar
> 95 g butter

Maria has the following ingredients.

    755 g of flour   1265 g of blackcurrants

    685 g of sugar   950 g of butter

Work out the greatest number of blackcurrant pies that Maria can make using her ingredients.
Show your working clearly.

(Total for Question 14 is 4 marks)

15 This graph can be used to find the distance travelled, in kilometres, by Chuck's car and the amount of petrol, in litres, used.

Distance (kilometres)

Amount of petrol (litres)
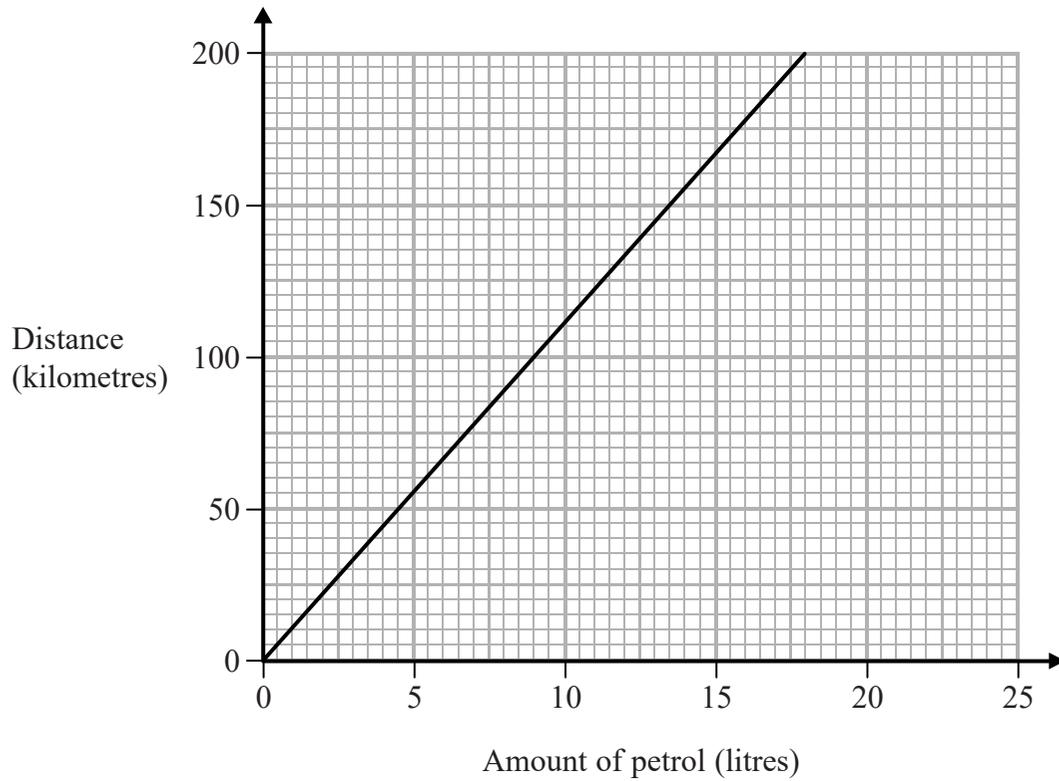
Chuck travels 150 kilometres in his car.

(a) Using the graph, find the amount of petrol used.

.... litres

(1)

Chuck lives in Fiji.
He puts petrol into the petrol tank of his car.
This petrol costs him 16.24 Fiji dollars.

1 litre of petrol in Fiji costs 2.03 Fiji dollars.

(b) Find the distance that Chuck's car travels on the petrol he put in his car.

.... kilometres

(3)

(Total for Question 15 is 4 marks)

16 The scale diagram shows the position of two statues, *A* and *B*, on a map.

North

North

×
B

×
A
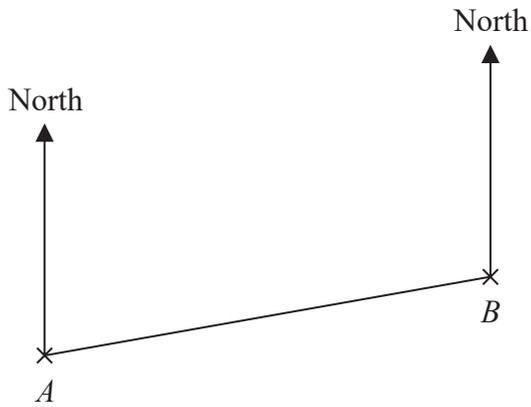
Scale: 2 cm represents 1 km

(a) Measure the bearing of *B* from *A*.

.. °

(1)

Another statue *C* is on a bearing of 120° from *B*.
Statue *C* is 4.5 km from *B*.

(b) Mark the position of statue *C* with a cross (×).
Label your cross *C*.

(3)

(Total for Question 16 is 4 marks)

17 (a)
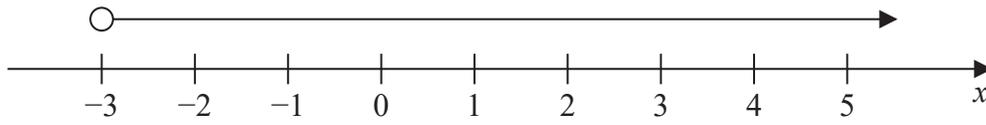
Write down the inequality shown on the number line.

....
(1)

(b) Solve the inequality $4y - 13 \leqslant y + 8$

....
(2)

(Total for Question 17 is 3 marks)

18 Show that $5\dfrac{2}{3} - 2\dfrac{3}{4} = 2\dfrac{11}{12}$

(Total for Question 18 is 3 marks)

19 (a) Complete the table of values for $y = 1 + 5x - x^2$

x	-1	0	1	2	3	4	5	6
y		1		7	7		1	

(2)

(b) On the grid, draw the graph of $y = 1 + 5x - x^2$ for values of x from -1 to 6

(2)
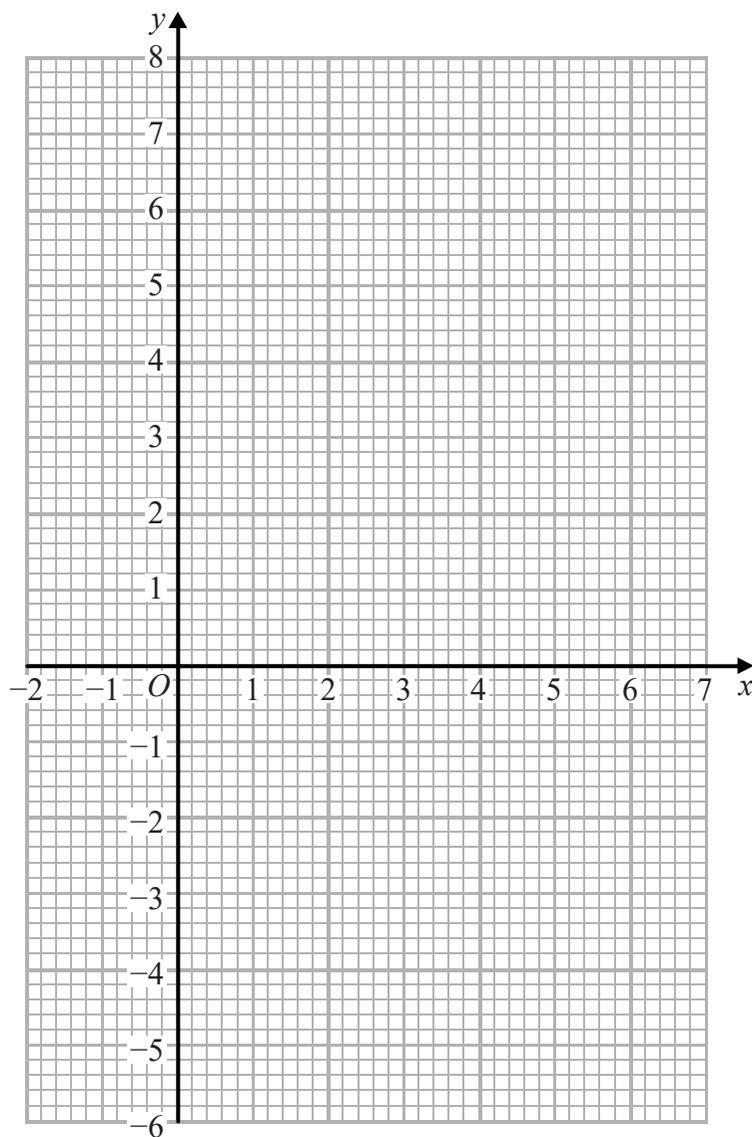
(Total for Question 19 is 4 marks)

Turn over ▶

20 *ABC* and *DEF* are similar triangles.
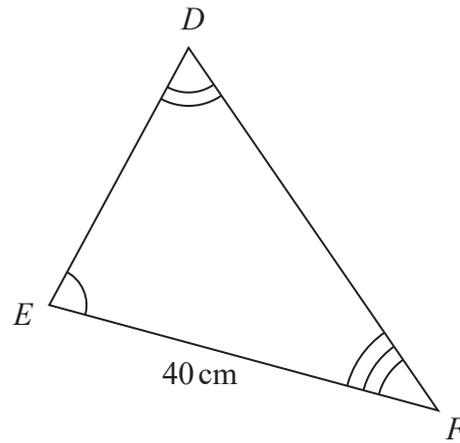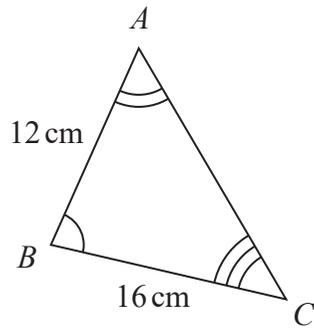
Diagram **NOT** accurately drawn

(a) Work out the length of *DE*.

.... cm

(2)

The area of triangle *DEF* is 525 cm²

(b) Find the area of triangle *DEF* in m²

.... m²

(2)

(Total for Question 20 is 4 marks)

21 There are some ice lollies in a freezer.

The flavour of each ice lolly is banana or strawberry or mint or chocolate.

Julius takes at random an ice lolly from the freezer.

The table shows the probabilities that the flavour of the ice lolly that Julius takes is banana or strawberry or chocolate.

Flavour	banana	strawberry	mint	chocolate
Probability	0.35	0.32		0.12

Work out the probability that the flavour of the ice lolly that Julius takes is either strawberry or mint.

....

(Total for Question 21 is 3 marks)

22 A football team played 55 games.
Each game was won, drawn or lost.

number of games won : number of games drawn : number of games lost = 6 : 3 : 2

Work out how many more games the team won than the team lost.

....

(Total for Question 22 is 3 marks)

23 $A = 3^2 \times 5^4 \times 7$ $B = 3^4 \times 5^3 \times 7 \times 11$

(a) Find the highest common factor (HCF) of A and B.

....
(2)

(b) Find the lowest common multiple (LCM) of A and B.

....
(2)

(Total for Question 23 is 4 marks)

24 (a) Write $840\,000$ in standard form.

....
(1)

(b) Work out $(6 \times 10^7) \div (8 \times 10^{-2})$
   Give your answer in standard form.

....
(2)

(Total for Question 24 is 3 marks)

25 Henri buys a yacht for 150 000 euros.

The yacht depreciates in value by 18% each year.

Work out the value of the yacht at the end of 3 years.
Give your answer correct to the nearest euro.

.... euros

(Total for Question 25 is 3 marks)

26 Line **L** is drawn on the grid.
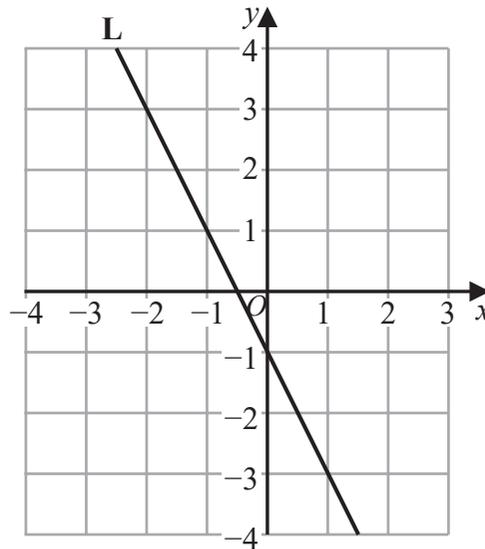
Find an equation for **L**.

....

(Total for Question 26 is 3 marks)

27
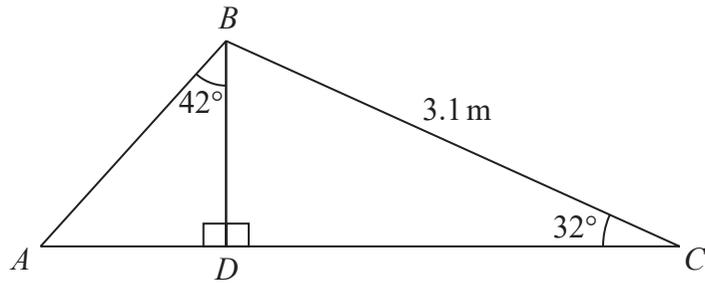

Diagram **NOT** accurately drawn

Calculate the length of *AB*.
Show your working clearly.
Give your answer correct to 3 significant figures.

.... m

(Total for Question 27 is 5 marks)

TOTAL FOR PAPER IS 100 MARKS

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