Please check the examination details below before entering your candidate information

Candidate surname	Other names

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

Centre Number | Candidate Number

Time 1 hour 30 minutes

Paper reference **1MA1/3F**

Mathematics

PAPER 3 (Calculator)
Foundation Tier

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator, Formulae Sheet (enclosed). 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.
- Good luck with your examination.

Turn over ▶

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P 6 6 3 8 0 A 0 1 2 0

Pearson

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write 35% as a fraction.

.....

(Total for Question 1 is 1 mark)

2 Work out $\frac{1}{4}$ of 28

.....

(Total for Question 2 is 1 mark)

3 Write down two factors of 12

....

(Total for Question 3 is 1 mark)

4 Simplify $2m \times 3$

.....

(Total for Question 4 is 1 mark)

5 Find $\sqrt{1.69}$

.....

(Total for Question 5 is 1 mark)

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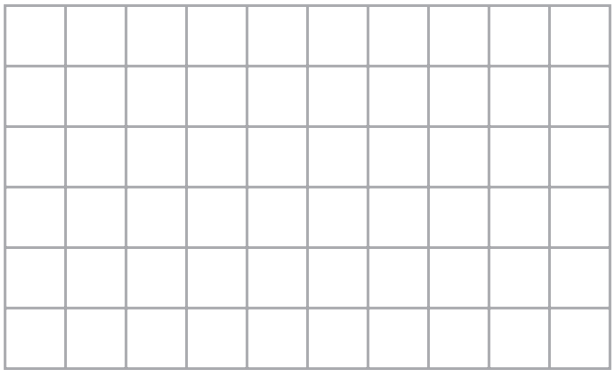
6



On the grid, draw a quadrilateral with

no lines of symmetry
and rotational symmetry of order 2

(Total for Question 6 is 2 marks)

7 The table shows the total number of apples sold and the total number of oranges sold in a shop in each of three weeks.

	Week 1	**Week 2**	**Week 3**
Number of apples	86	75	92
Number of oranges	68	80	76

In total for the three weeks, more apples than oranges were sold.
How many more?

.....

(Total for Question 7 is 3 marks)

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8 Here are the first five terms of a number sequence.

3 8 13 18 23

(a) Write down the next two terms of this sequence.

....

(1)

Jim says that 50 is a term in this sequence.
Jim is wrong.

(b) Explain why.

.....

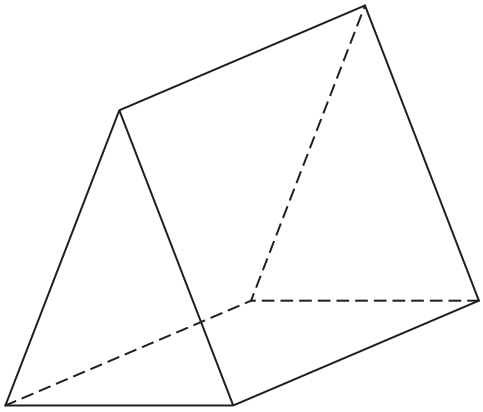
.....

.....

(1)

(Total for Question 8 is 2 marks)

9 The diagram shows a solid triangular prism.



(a) Write down the number of faces of the prism.

.....

(1)

(b) Write down the number of edges of the prism.

.....

(1)

(Total for Question 9 is 2 marks)

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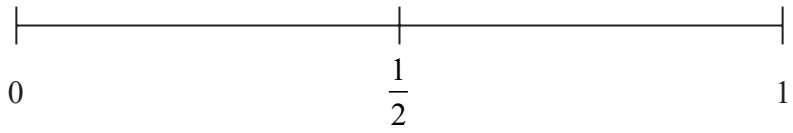
10 Here is a list of 8 numbers.

2 2 3 5 6 6 8 9

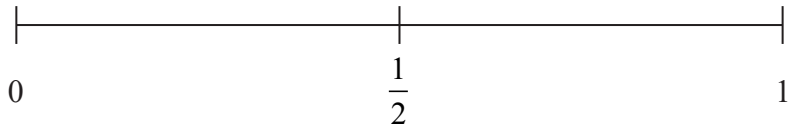
Kim picks at random one of these numbers.

(a) On the probability scale below, mark with a cross (×) the probability that Kim picks a number 7



(1)

(b) On the probability scale below, mark with a cross (×) the probability that Kim picks a number greater than 5



(1)

(c) Find the probability that Kim picks an even number.

.....

(2)

(Total for Question 10 is 4 marks)

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11 Sinita wants to make 35 picture frames.
She needs 4 nails for each frame.

Sinita has 3 boxes of nails.
There are 48 nails in each box.

Has Sinita got enough nails to make all 35 frames?
Show how you get your answer.

(Total for Question 11 is 3 marks)

12 Write 60 metres as a fraction of 1000 metres.
Give your answer in its simplest form.

.....

(Total for Question 12 is 2 marks)

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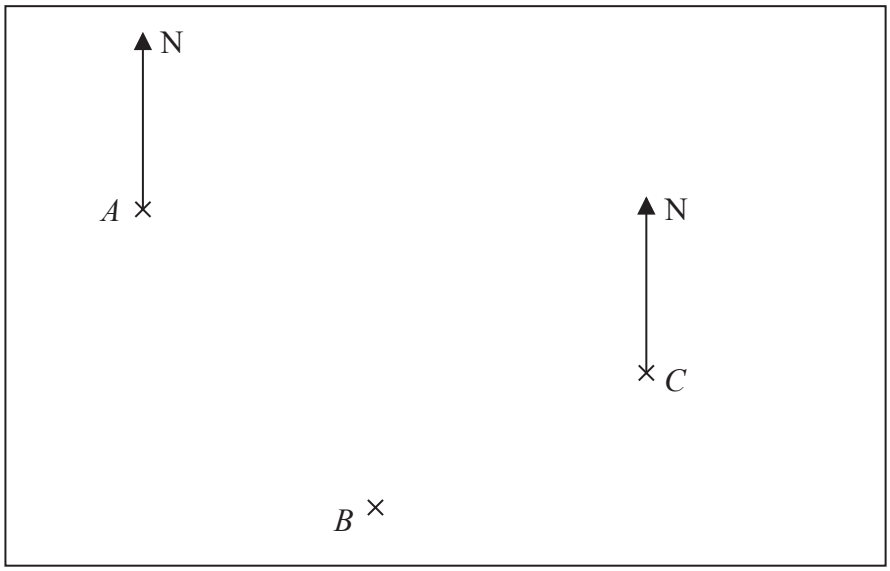
13 The accurately drawn map shows the positions of three points, *A*, *B* and *C*, in a field.



Scale: 1 cm represents 150 metres

Parveen walks in a straight line from *A* to *B*.
She then walks in a straight line from *B* to *C*.

Susan walks in a straight line from *A* to *C*.

Parveen walks more metres than Susan.

(a) How many more?

..... metres

(3)

(b) Find by measurement the bearing of *A* from *C*.

..... °

(1)

(Total for Question 13 is 4 marks)

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14 Here is the shoe size of each of 12 boys in a class.

4 5 6 6 6 7 7 8 8 8 8 9

(a) Find the median.

.....

(1)

(b) Work out the range.

.....

(1)

For the shoe sizes of each of 12 girls in the class,

the median size is 6
the range is 3

(c) Compare the distribution of the shoe sizes of the boys with the distribution of the shoe sizes of the girls.

.....

.....

.....

.....

.....

.....

(2)

(Total for Question 14 is 4 marks)

15 Work out $\dfrac{2.75 \times 14.6}{10 - 1.97}$

.....

(Total for Question 15 is 2 marks)

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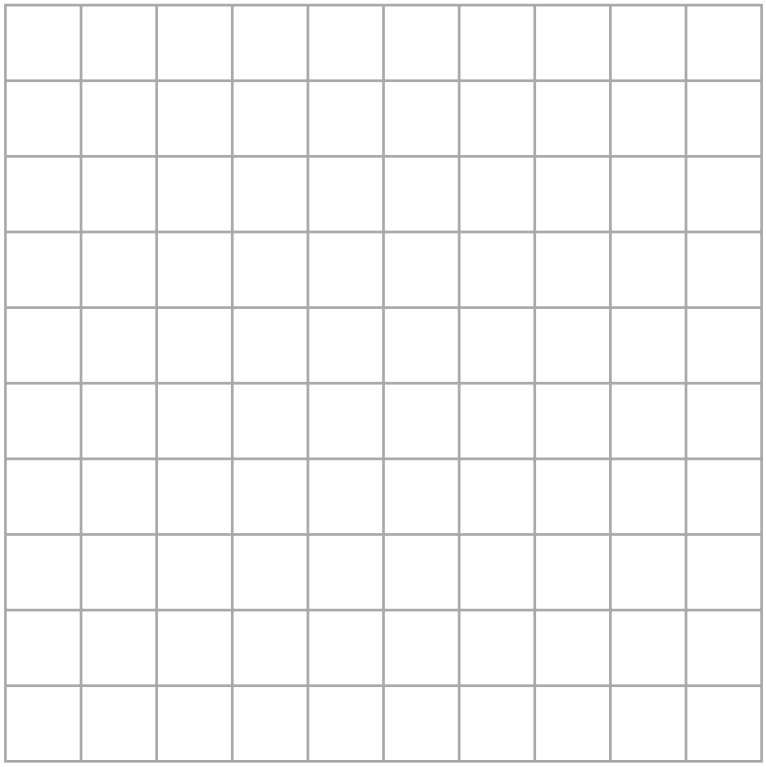
16 On the centimetre grid, draw an isosceles triangle with an area of 12 cm^2



(Total for Question 16 is 2 marks)

17 (a) Expand $3(4 - 2x)$

.....

(1)

(b) Solve $\frac{3y}{4} = 12$

$y =$ .....

(2)

(c) Factorise $4p + 6$

.....

(1)

(Total for Question 17 is 4 marks)

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18 (a) Write 2530 correct to 2 significant figures.

.....

(1)

(b) Write 0.0874 correct to 1 significant figure.

.....

(1)

(Total for Question 18 is 2 marks)

19 There are 400 counters in a box.
The counters are red or yellow or green.

$\frac{3}{8}$ of the counters are red.

82 of the counters are yellow.

What percentage of the counters are green?

.....%

(Total for Question 19 is 4 marks)

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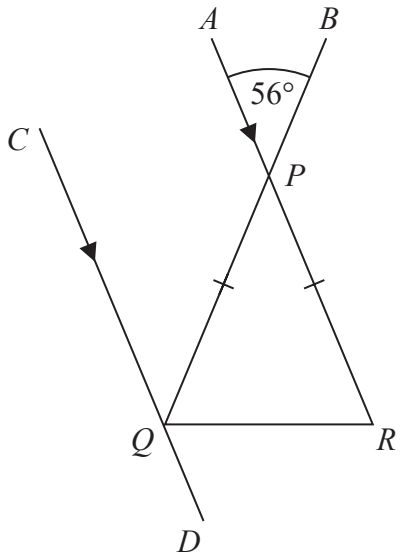
20 In the diagram, PQR is an isosceles triangle with $PQ = PR$.



APR and CQD are parallel lines.
BPQ is a straight line.

Angle $APB = 56°$

Work out the size of angle CQR.
Give a reason for each stage of your working.

(Total for Question 20 is 5 marks)

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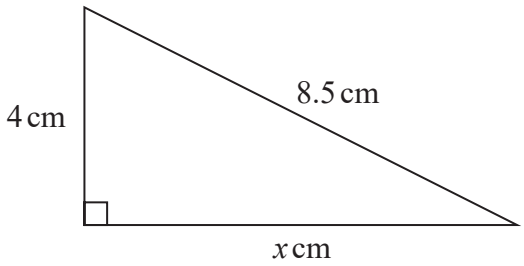
21 Work out the lowest common multiple (LCM) of 24 and 56

.....

(Total for Question 21 is 2 marks)

22 Here is a right-angled triangle.



Work out the value of x.

$x =$ .....

(Total for Question 22 is 2 marks)

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23 $T = 4m^2 - 11$

(a) Work out the value of T when $m = -3$

$T =$ .....

(2)

(b) Make p the subject of the formula $d = 3p + 4$

.....

(2)

(Total for Question 23 is 4 marks)

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24 Rick, Selma and Tony are playing a game with counters.

Rick has some counters.
Selma has twice as many counters as Rick.
Tony has 6 counters less than Selma.

In total they have 54 counters.

the number of counters Rick has : the number of counters Tony has = 1 : p

Work out the value of p.

$p =$ .....

(Total for Question 24 is 5 marks)

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25 Jo is going to buy 15 rolls of wallpaper.

Here is some information about the cost of rolls of wallpaper from each of two shops.

Chic Decor	**Style Papers**
3 rolls for £36	Pack of 5 rolls normal price £70 12% off the normal price

Jo wants to buy the 15 rolls of wallpaper as cheaply as possible.

Should Jo buy the wallpaper from Chic Decor or from Style Papers?
You must show how you get your answer.

(Total for Question 25 is 4 marks)

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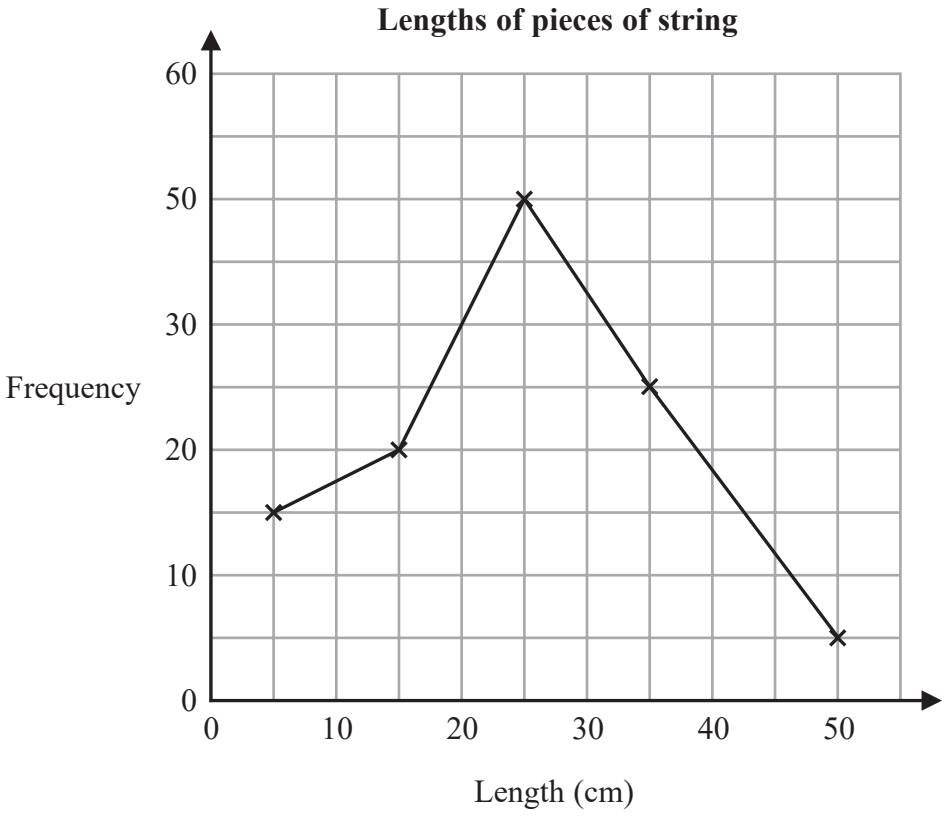
26 The table gives information about the lengths, in cm, of some pieces of string.

Length (t cm)	Frequency
$0 < t \leqslant 10$	15
$10 < t \leqslant 20$	20
$20 < t \leqslant 30$	50
$30 < t \leqslant 40$	25
$40 < t \leqslant 50$	5

Amos draws a frequency polygon for the information in the table.



Write down **two** mistakes that Amos has made.

1 .....

.....

2 .....

.....

(Total for Question 26 is 2 marks)

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27 Jessica runs for 15 minutes at an average speed of 6 miles per hour.
She then runs for 40 minutes at an average speed of 9 miles per hour.

It takes Amy 45 minutes to run the same total distance that Jessica runs.

Work out Amy's average speed.
Give your answer in miles per hour.

..... miles per hour

(Total for Question 27 is 4 marks)

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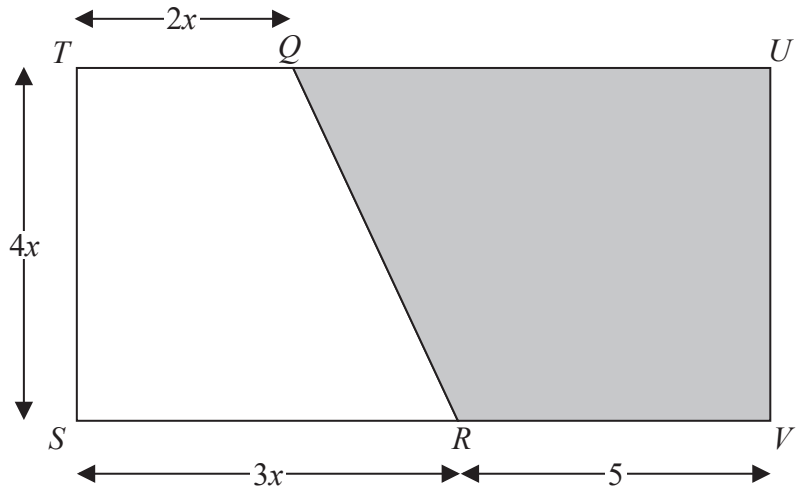
28 The diagram shows rectangle *STUV*.
TQU and *SRV* are straight lines.
All measurements are in cm.



The area of trapezium *QUVR* is A cm^2

Show that $A = 2x^2 + 20x$

(Total for Question 28 is 3 marks)

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29 Change 30 metres per second to kilometres per hour.

..... kilometres per hour

(Total for Question 29 is 2 marks)

30 The value of Michelle's car has decreased by 15%
The car now has a value of £13 600

Work out the value of Michelle's car before the decrease.

£.....

(Total for Question 30 is 2 marks)

TOTAL FOR PAPER IS 80 MARKS

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