Write your name here

Surname	Other names

Pearson Edexcel GCSE

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics B

Unit 2: Number, Algebra, Geometry 1 (Non-Calculator)

Foundation Tier

Thursday 9 June 2016 – Morning
Time: 1 hour 15 minutes

Paper Reference
5MB2F/01

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. 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.*
- **Calculators must not be used.**



Information

- The total mark for this paper is 60
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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P 4 6 5 5 3 A 0 1 2 0

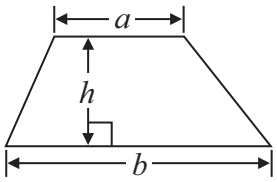
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GCSE Mathematics 2MB01

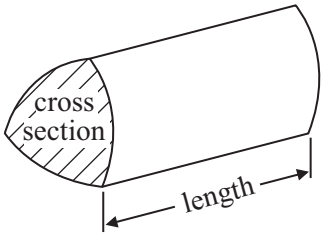
Formulae: Foundation Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

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



Volume of prism = area of cross section × length



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Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1 (a) Write the number **six thousand and thirty seven** in figures.

.....

(1)

(b) Write the number 8377 correct to the nearest ten.

.....

(1)

(c) Write these numbers in order of size.
Start with the smallest number.

43 37 19 26 21

.....

(1)

(Total for Question 1 is 3 marks)

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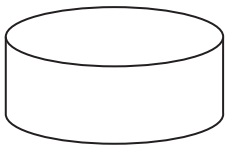
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2 (a) Write down the name of a quadrilateral that has 4 right angles.

.....

(1)

The diagram shows a solid shape.



(b) Write down the mathematical name of this shape.

.....

(1)

(c) In the space below, draw accurately a circle of radius 4 cm.
Use the cross (×) as the centre of your circle.

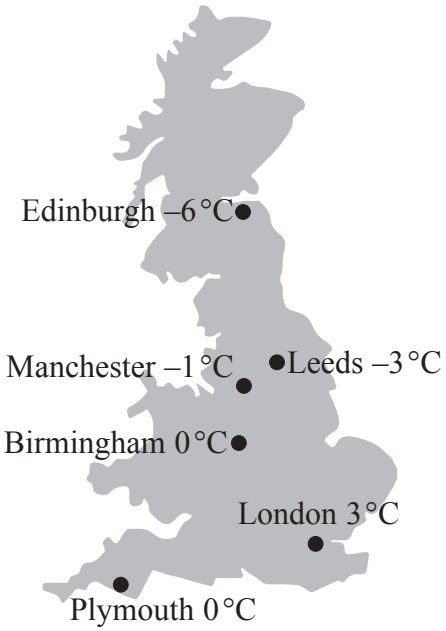
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(1)

(Total for Question 2 is 3 marks)

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3



The diagram shows the temperatures in 6 cities at midnight one day.

(a) Which city had the highest temperature?

.....

(1)

(b) Work out the difference in temperature between

(i) Manchester and Edinburgh,

..... °C

(ii) London and Leeds.

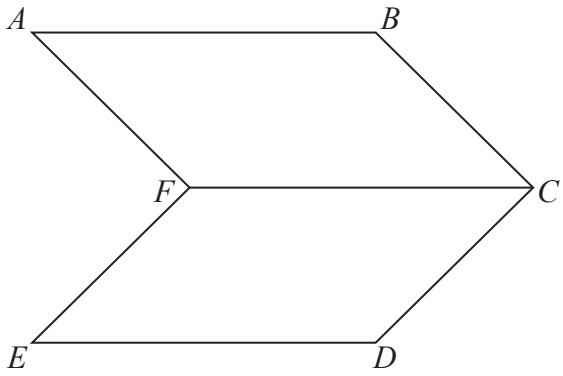
..... °C

(2)

(Total for Question 3 is 3 marks)

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4 The diagram shows two parallelograms.



(a) Measure the length of the line *AB*.
Give your answer in cm.

..... cm

(1)

(b) Mark with arrows (>>) one pair of parallel lines.

(1)

(c) Mark with the letter *x* an acute angle.

(1)

(d) Mark with the letter *y* the angle *EDC*.

(1)

(Total for Question 4 is 4 marks)

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***5** A second class stamp costs 53 pence.

Hazel wants to buy 10 second class stamps.
She has £5 to spend on stamps.

Does Hazel have enough money to buy the stamps?

(Total for Question 5 is 2 marks)

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6

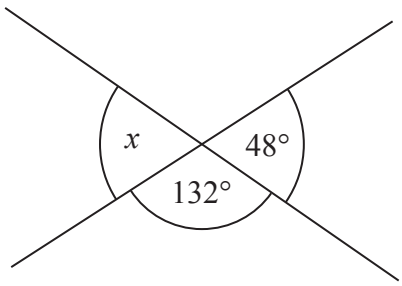


Diagram **NOT** accurately drawn

(a) Write down the size of the angle marked x.

.....°

(1)

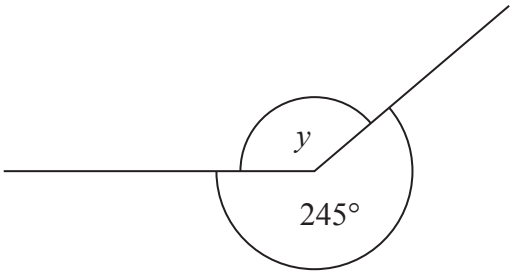


Diagram **NOT** accurately drawn

(b) Work out the size of the angle marked y.

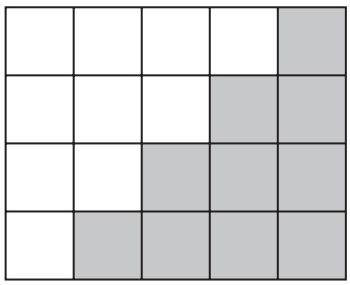
.....°

(1)

(Total for Question 6 is 2 marks)

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7



(a) What fraction of this shape is shaded?

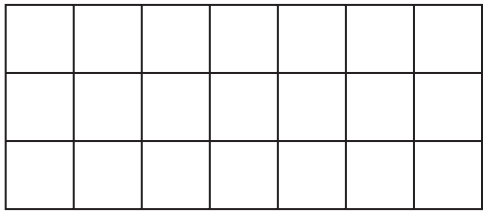
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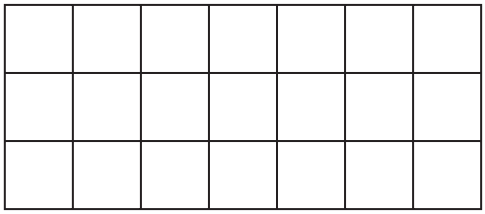
(1)

*(b) Here are two fractions $\frac{2}{3}$ and $\frac{5}{7}$

Which is the larger fraction?
Explain your answer.

You may use the grids below to help explain your answer.



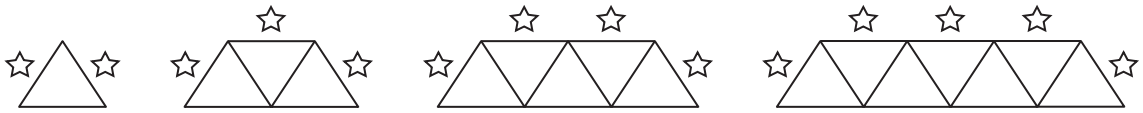


(3)

(Total for Question 7 is 4 marks)

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8 Here is a sequence of patterns made from triangles and stars.



Pattern 1 Pattern 2 Pattern 3 Pattern 4

(a) How many stars are needed for Pattern 5?

.....

(1)

(b) How many triangles are needed for Pattern 6?

.....

(1)

A pattern in the sequence is made from exactly 10 stars.

(c) How many triangles are needed for this pattern?

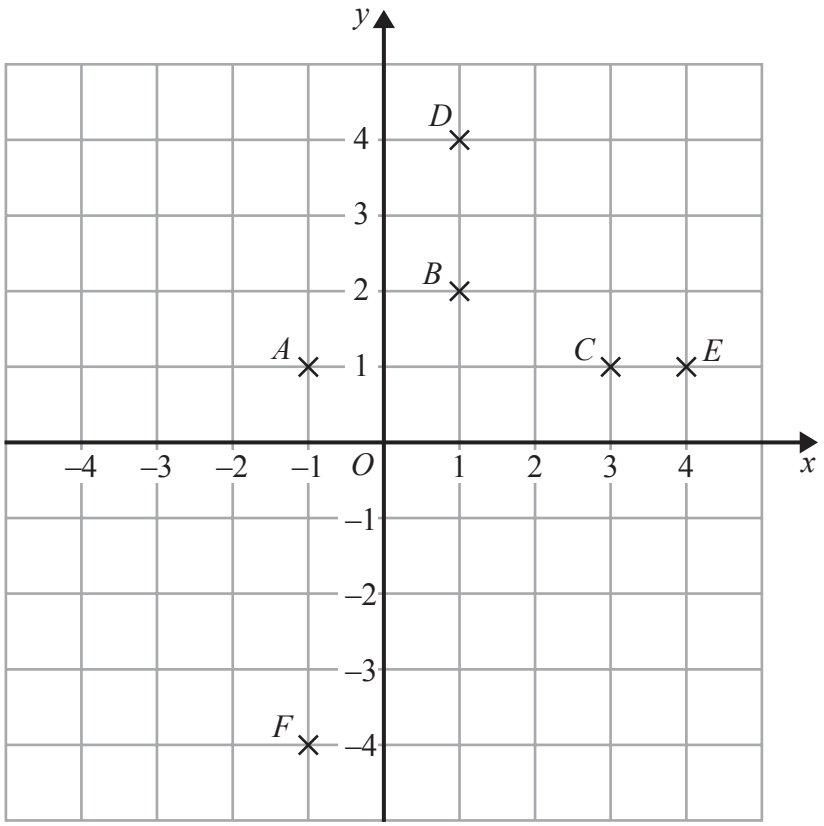
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(2)

(Total for Question 8 is 4 marks)

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9



The points A, B, C, D, E and F are shown on the grid.

One of these points has coordinates (4, 1).

(a) Which point?

.....

(1)

(b) (i) On the grid, mark with a cross (×) a point P such that the shape $ABCP$ is a kite.
Label your point P.

(ii) Write down the coordinates of your point P.

(..... , ...)

(2)

(Total for Question 9 is 3 marks)

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10 There are 210 counters in a bag.

30% of these counters are red.

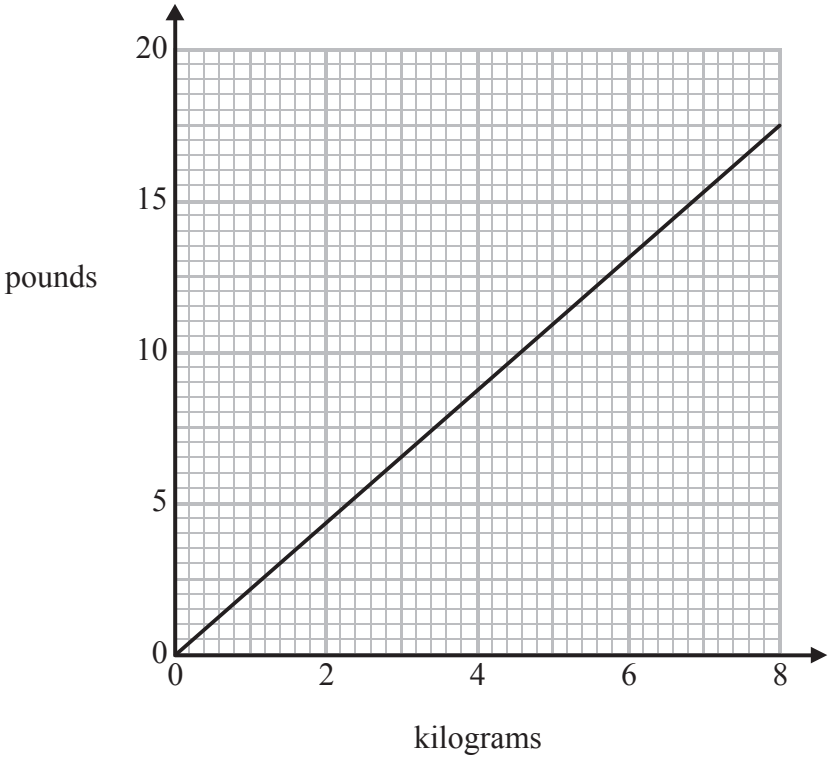
Work out the number of red counters in the bag.

.....

(Total for Question 10 is 2 marks)

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11 You can use this conversion graph to change between kilograms and pounds.



(a) Use the conversion graph to change 5 kilograms to pounds.

..... pounds
(1)

Brett weighs 150 pounds.
Henri weighs 64 kilograms.

(b) Work out their total weight.
Give your answer in kilograms.
You must show your working.

..... kilograms
(3)

(Total for Question 11 is 4 marks)

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***12** The diagram shows the floor plan of a room.

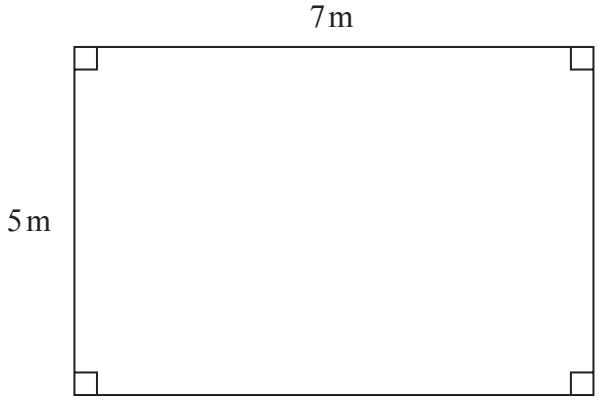


Diagram **NOT** accurately drawn

Shamus is going to put a border all around the room.

Borders are sold in rolls.

The table gives some information about three types of border.

Type	Length of roll (in metres)	Cost
Plain	3	£20
Patterned	2	£11
Textured	2.4	£14.50

Shamus is going to use only one type of border.

He has a budget of £150

Which of these types of border can Shamus afford to buy?

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(Total for Question 12 is 5 marks)

13 (a) Write 7300 correct to one significant figure.

.....

(1)

(b) Write 5.69 correct to one significant figure.

.....

(1)

(Total for Question 13 is 2 marks)

---

14 (a) Simplify $7a - 3a$

.....

(1)

(b) Simplify $2 \times 3m$

.....

(1)

(c) Simplify $x^2 + x^2 + x^2$

.....

(1)

(d) Simplify $3cd + 4cd$

.....

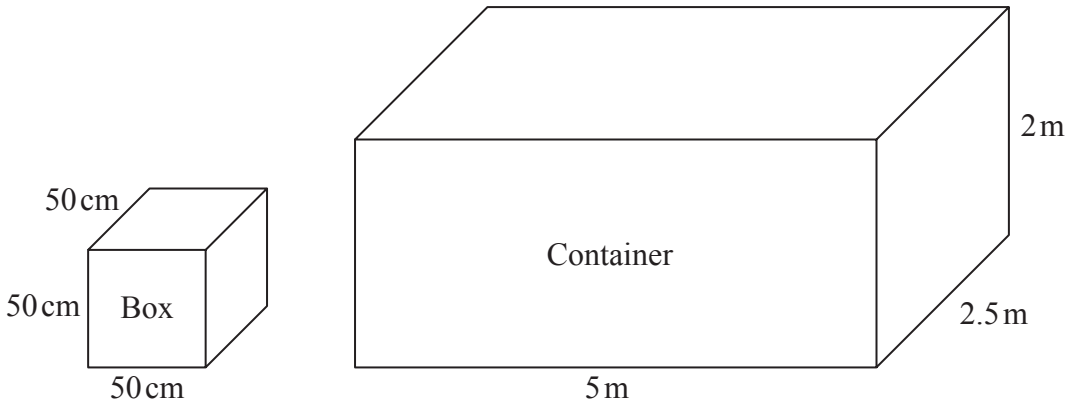
(1)

(Total for Question 14 is 4 marks)

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***15**

Diagram **NOT** accurately drawn



Chao transports microwave ovens from China to the UK.

He puts each microwave oven in a box.
Each box is a cube of side 50 cm.

He then puts each box in a container.
Each container is a cuboid of size 5 m by 2.5 m by 2 m.

Chao has 500 boxes.
He has 3 containers.

Will the 500 boxes fit into these 3 containers?

(Total for Question 15 is 4 marks)

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16

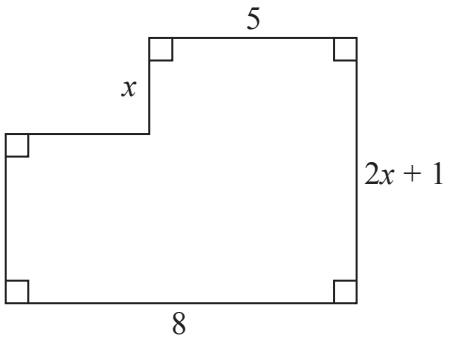


Diagram **NOT** accurately drawn

Here is a shape.
All the measurements are in metres.

The area of the shape is A m^2.

Find a formula for A in terms of x.

.....

(Total for Question 16 is 3 marks)

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17 Shelley sells books.

On Saturday she is going to give a free book mark and a free dust cover with each book she sells.
All the books are the same size.

Shelley needs to buy the book marks and the dust covers.

Book marks come in boxes.
Each box contains 24 book marks.

Dust covers come in packs.
Each pack contains 36 dust covers.

Shelley wants to have enough book marks and dust covers for 250 books.

She buys exactly the same number of book marks and dust covers.

Work out the number of boxes of book marks and the number of packs of dust covers she buys.
You must show all your working.

..... boxes of book marks

..... packs of dust covers

(Total for Question 17 is 4 marks)

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18

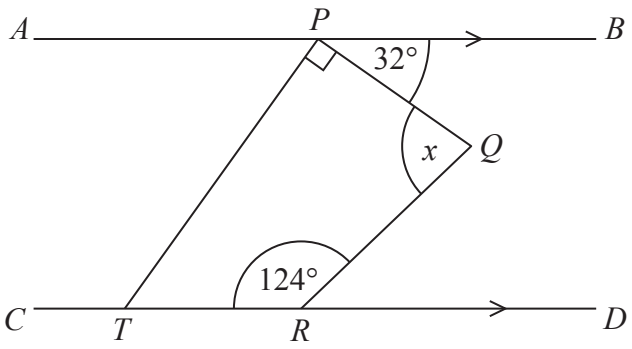


Diagram **NOT** accurately drawn

APB is parallel to *CTRD*.
PQRT is a quadrilateral.

Work out the size of the angle marked *x*.
You must show your working.

.....°

(Total for Question 18 is 4 marks)

TOTAL FOR PAPER IS 60 MARKS

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