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

Friday 8 November 2013 – 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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6/5/4/2/2/

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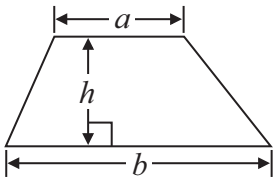
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GCSE Mathematics 2MB01

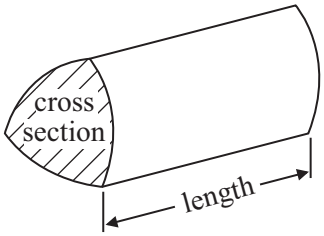
Formulae: Foundation Tier

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



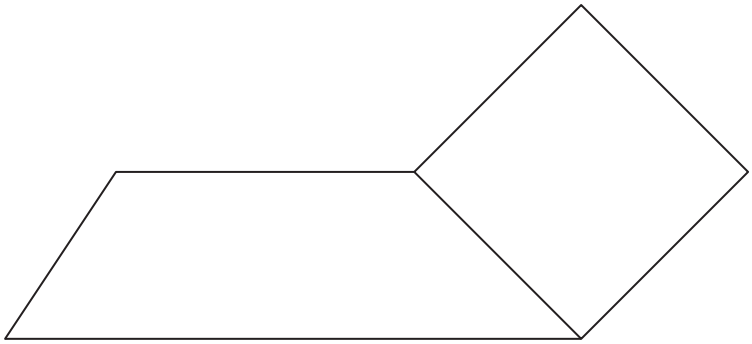
Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1 The diagram shows a trapezium and a square.



(a) Write down the size of each of the angles of a square.

.....°

(1)

(b) Mark, with the letter *O,* an obtuse angle.

(1)

(c) Mark, with arrows (>>), a pair of parallel lines.

(1)

(Total for Question 1 is 3 marks)

2 There will be 30 people at a party.
There have to be enough chairs and tables for all 30 people.
There will be 4 chairs at each table.

What is the least number of tables needed?

.....

(Total for Question 2 is 2 marks)

3 Here is a list of numbers.

2	3	5	8	10	16	21	24

From the numbers in the list,

(a) write down an odd number

.....

(1)

(b) write down the square number

.....

(1)

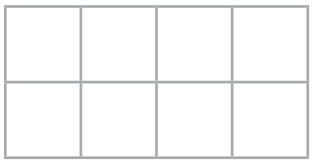
(c) write down the number which is a multiple of 6

.....

(1)

(Total for Question 3 is 3 marks)

4



(a) Shade $\frac{3}{4}$ of this shape.

(1)

(b) Write 20% as a fraction.
Give your answer in its simplest form.

.....

(2)

(Total for Question 4 is 3 marks)

5 (a) Simplify $p + 2p$

.....

(1)

(b) Simplify $4 \times 2t$

.....

(1)

(Total for Question 5 is 2 marks)

***6** Here is a menu for Joe's Cafe.

Joe's Cafe

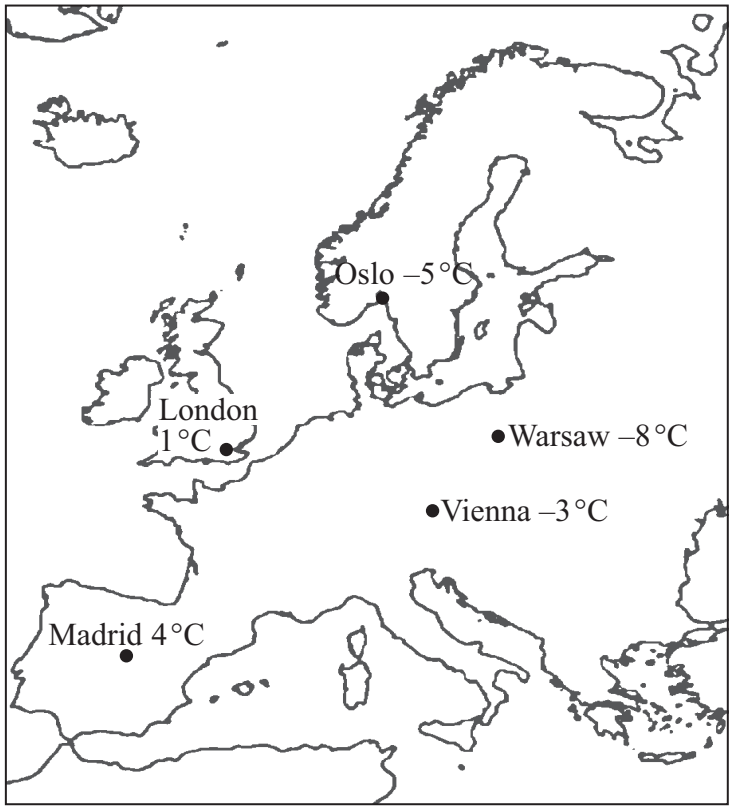
Sandwich	£3.25	Tea	£1.55
Pasty	£2.99	Coffee	£1.95
Cake	£2.25	Orange	89p
Soup	£3.19		

Jim has four £2 coins.
He buys a sandwich and a pasty at Joe's Cafe.

Does Jim have enough money left to buy a coffee?

(Total for Question 6 is 4 marks)

7 Here is a map.



The map shows the temperatures in 5 cities at midday.

(a) Which city has the lowest temperature?

.....

(1)

(b) Work out the difference between the temperature in Oslo and the temperature in London.

..... °C

(1)

By midnight, the temperature in Madrid had gone down by 7 °C.

(c) Work out the temperature in Madrid at midnight.

..... °C

(1)

(Total for Question 7 is 3 marks)

8

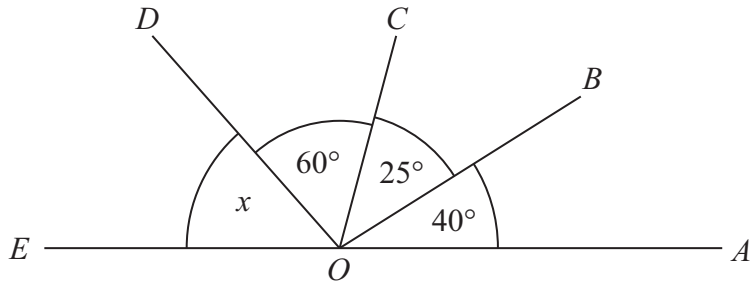


Diagram **NOT** accurately drawn

(a) Write down the size of the angle *AOB*.

.....°

(1)

EOA is a straight line.

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

.....°

(ii) Give a reason for your answer.

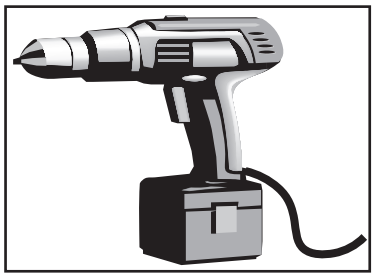
.....

(3)

(Total for Question 8 is 4 marks)

9 You can use this rule to work out the cost, in pounds, of hiring a drill.

To find the cost in pounds Multiply the number of days hired by 8 and then add 20



Janice hires a drill for 3 days.

(a) Work out the cost.

£.....

(2)

Karim hires the drill for 6 days.
Janice says

"It will cost you twice as much as it cost me."

(b) Is Janice right?

You must show how you got your answer.

.....

.....

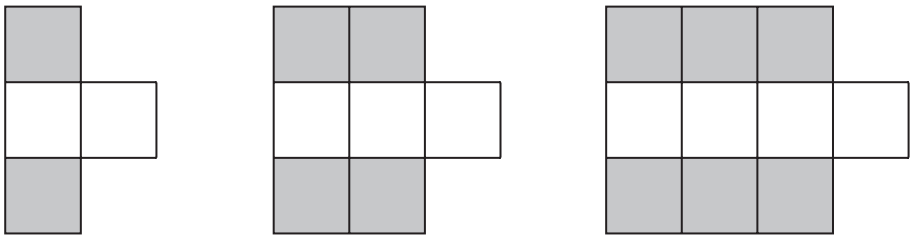
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.....

(2)

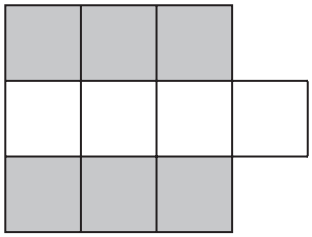
(Total for Question 9 is 4 marks)

10 Here are some patterns made from white centimetre squares and grey centimetre squares.



Pattern 1 Pattern 2 Pattern 3

(a) In the space below, complete Pattern 4



(1)

(b) Find the number of grey squares in Pattern 6

.....

(1)

A Pattern has 20 grey squares.

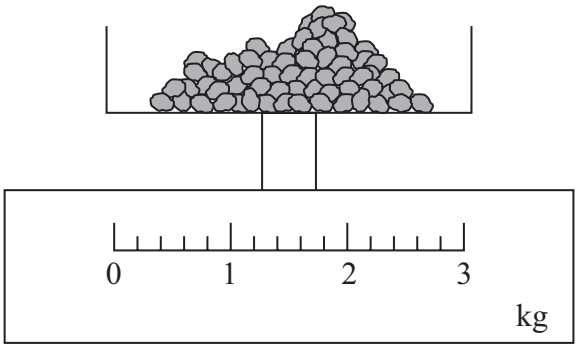
(c) Work out how many white squares there are in this Pattern.

.....

(2)

(Total for Question 10 is 4 marks)

11 Jordan wants to make two dried fruit puddings.
He weighs some dried fruit.



The dried fruit weighs 0.8 kg.

(a) On the scale, show with an arrow (↑), 0.8 kg.

(1)

Jordan needs $\frac{3}{4}$ kg of dried fruit to make one pudding.

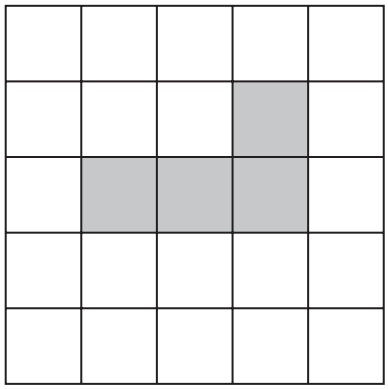
(b) Work out how much more dried fruit Jordan needs to make two puddings.
Give your answer in grams.

.....grams

(4)

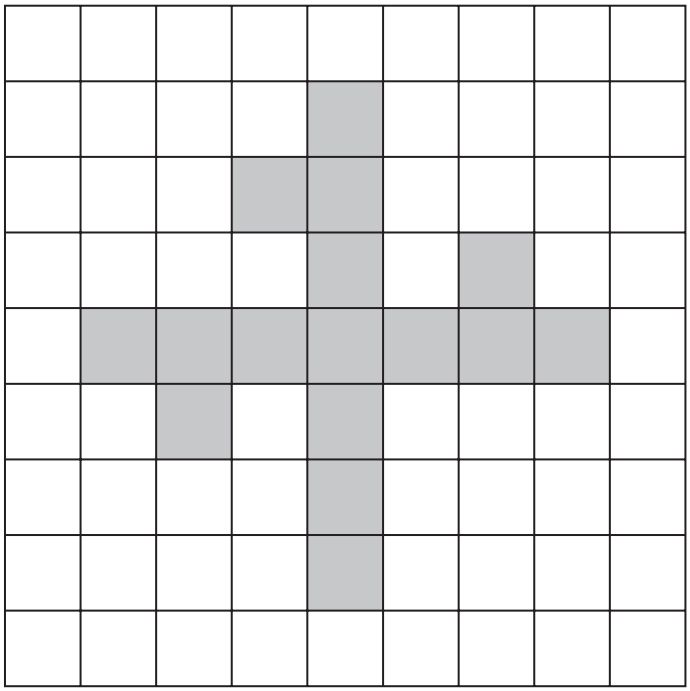
(Total for Question 11 is 5 marks)

12 (a) Shade **one** more square to make a pattern with exactly 1 line of symmetry.



(1)

(b) Shade **one** more square to make a pattern with rotational symmetry of order 4



(1)

(Total for Question 12 is 2 marks)

***13** The normal price of a denim shirt at a shop is £9.60

On Special Offer Day, there is $\frac{1}{3}$ off the normal price.



Billy has £13
Has he enough money to buy two denim shirts on Special Offer Day?
You must show all your working.

(Total for Question 13 is 4 marks)

14 Here is an isosceles triangle.

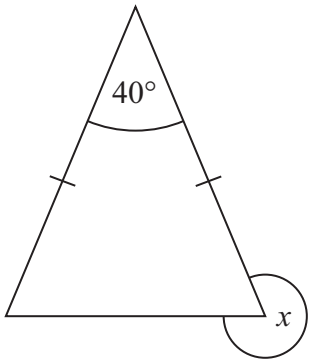


Diagram **NOT** accurately drawn

Work out the size of the angle marked x.

.....°

(Total for Question 14 is 3 marks)

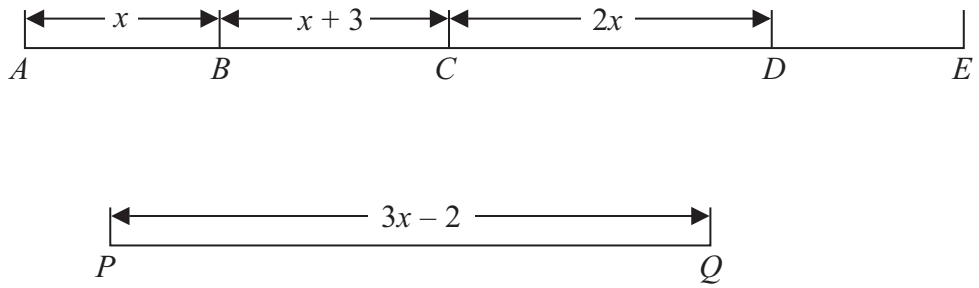
15 (a) Expand $5(2c + 3d)$

.....

(1)

(b) Here are two straight lines, $ABCDE$ and PQ.

Diagrams **NOT** accurately drawn



In the diagrams all the lengths are in cm.
$AE = 2PQ$.
Find an expression, in terms of x, for the length of DE.
Give your answer in its simplest form.

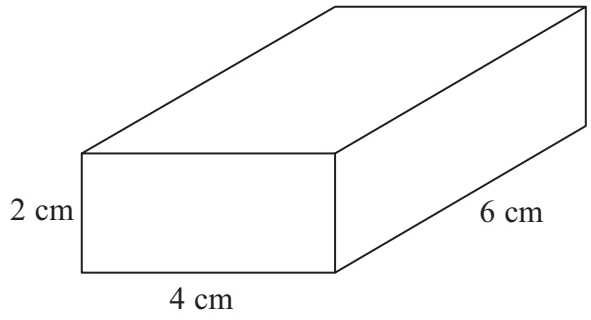
..... cm

(4)

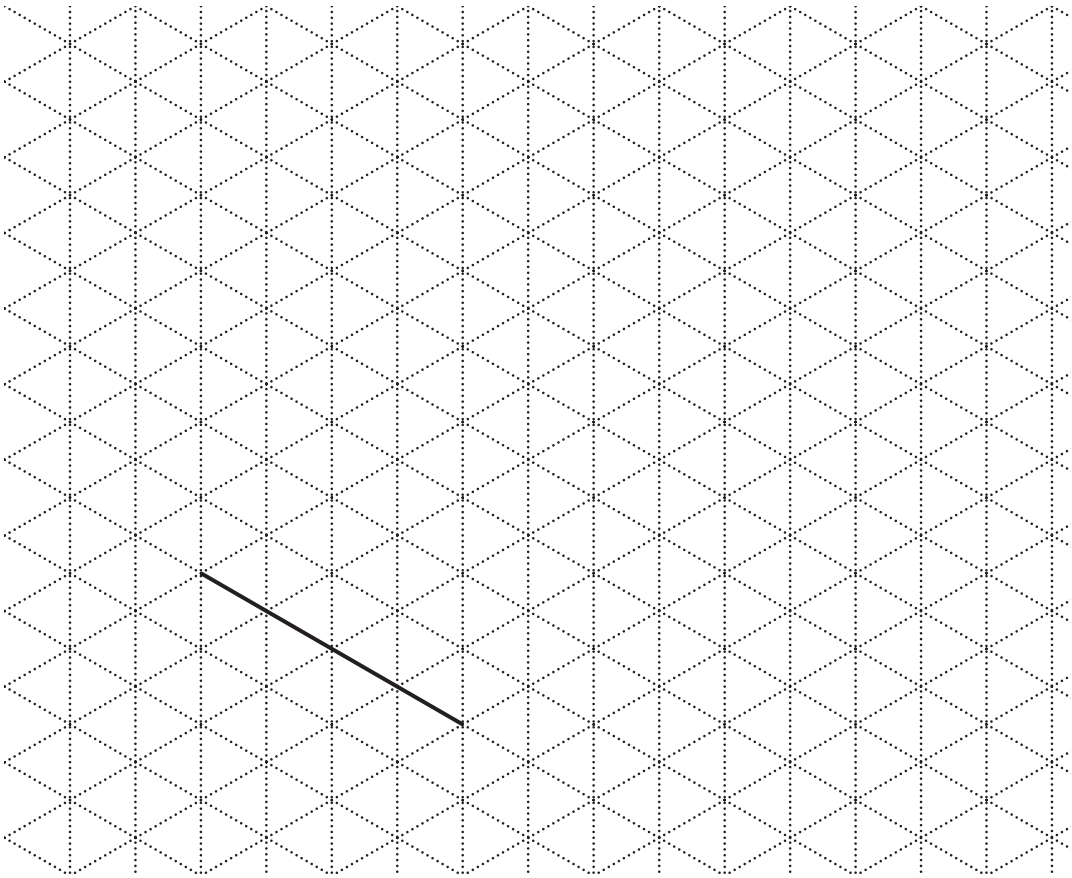
(Total for Question 15 is 5 marks)

16 Here is a box in the shape of a cuboid.

Diagram **NOT** accurately drawn



(a) Complete an accurate drawing of the cuboid on the isometric grid.
One edge of the cuboid has been drawn for you.



(2)

The box is made to hold cubes.
Each cube has edges of length 2 cm.

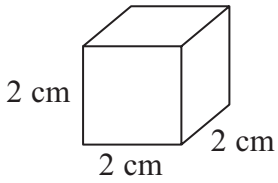


Diagram **NOT** accurately drawn

(b) Work out the largest number of cubes that can fit into the box.

.....

(2)

(Total for Question 16 is 4 marks)

17 Here is a diagram of a small field.

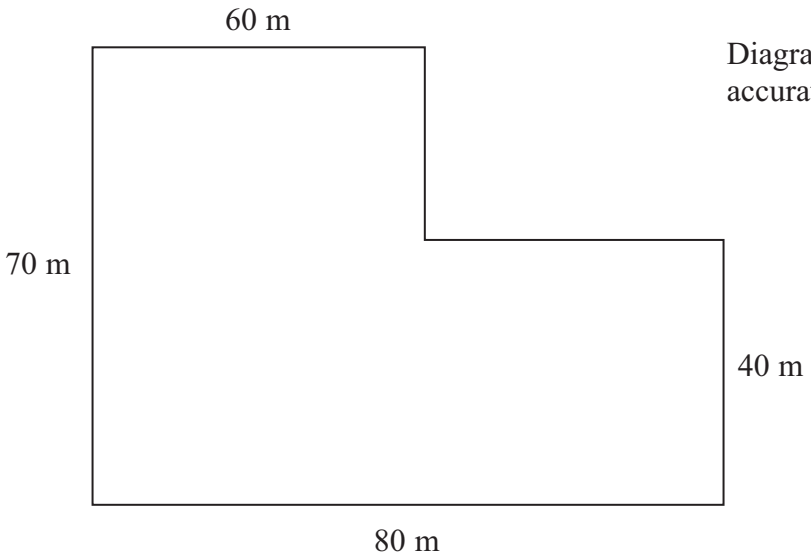


Diagram **NOT** accurately drawn

All the corners are right angles.
90% of the field is going to be used to grow wheat.

Work out the area of the field that is going to be used to grow wheat.

.....m^2

(Total for Question 17 is 5 marks)

TOTAL FOR PAPER IS 60 MARKS

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