Write your name here

Surname	Other names

Edexcel GCSE

Centre Number	Candidate Number

Mathematics B

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

Foundation Tier

Thursday 8 November 2012 – Afternoon
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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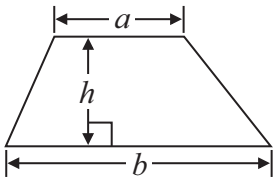
PEARSON

GCSE Mathematics 2MB01

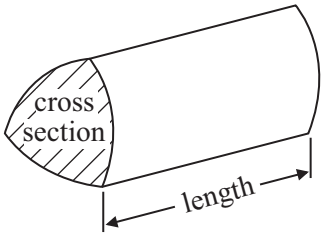
Formulae: Foundation Tier

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 list shows the times trains go from Swindon to London.

Times of trains from Swindon to London
20 11
20 29
21 11
21 29
22 28

Andy is going from Swindon to London by train.
He gets to Swindon at 20 15

(a) How many minutes should Andy have to wait for a train?

..... minutes

(1)

A train leaves Swindon at 22 28
This train takes 72 minutes to get to London.

(b) What time does this train get to London?

.....

(2)

(Total for Question 1 is 3 marks)

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

3517 7135 5713 1357

.....

(1)

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

0.354 0.4 0.35 0.345

.....

(1)

(Total for Question 2 is 2 marks)

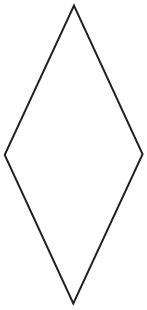
3 Here is a symbol.

(a) Write down the number of lines of symmetry for this symbol.

.....

(1)

Here is a quadrilateral.



(b) (i) Write down the mathematical name for this quadrilateral.

.....

(ii) Write down the order of rotational symmetry of this quadrilateral.

.....

(2)

(Total for Question 3 is 3 marks)

4 (a) Write 5643 to the nearest hundred.

.....

(1)

(b) Write 197 768 to the nearest thousand.

.....

(1)

(Total for Question 4 is 2 marks)

5 Eric buys some bottles of water.
Each bottle of water costs £1.95

Eric has £10 to spend.
He buys as many bottles of water as possible.

(i) Work out how many bottles of water Eric buys.

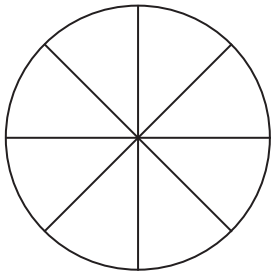
.....

(ii) Work out how much change Eric should get.

.....

(Total for Question 5 is 4 marks)

6 (a) Shade $\frac{3}{8}$ of this shape.



(1)

(b) Change 0.6 into a percentage.

.....%

(1)

(c) Work out $-3 + 7$

.....

(1)

(d) Work out $\frac{3}{8}$ of £40

£ .....

(2)

(e) Write down **one** prime number from the list of numbers below.

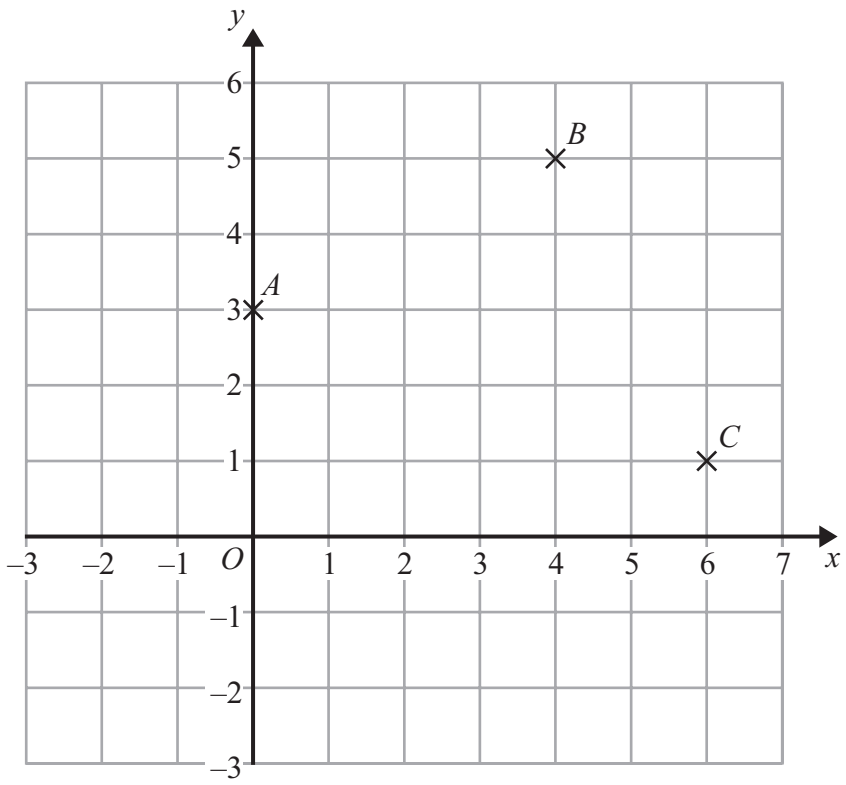
9 13 17 21 25

.....

(1)

(Total for Question 6 is 6 marks)

7



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

(..... , ...)

(1)

A, B and C are three corners of a square.

(b) On the grid, mark with a cross (×) the point D so that $ABCD$ is a square.

(1)

(Total for Question 7 is 2 marks)

8 Here are the first 6 terms of a number sequence.

5 9 13 17 21 25

(a) Write down the next term of the sequence.

.....

(1)

(b) (i) Work out the eleventh term of the sequence.

.....

(ii) Explain how you found your answer.

.....

.....

.....

(2)

(Total for Question 8 is 3 marks)

9 (a) Simplify $t + t + t$

.....

(1)

(b) Simplify $3 \times w \times 2$

.....

(1)

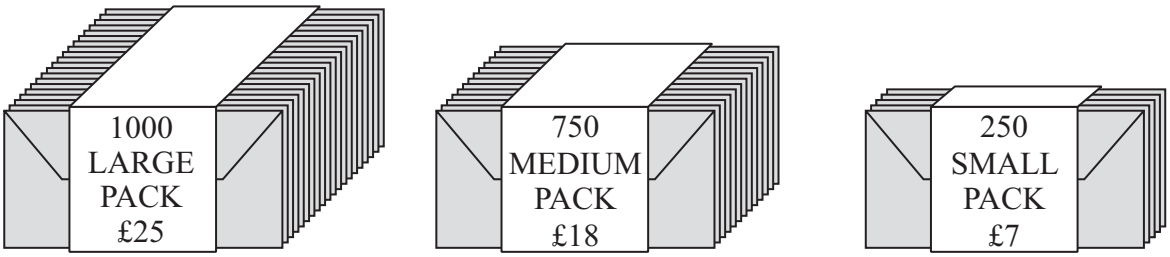
(c) Simplify $5mn - 3mn$

.....

(1)

(Total for Question 9 is 3 marks)

***10** '*Offices R Us*' sells envelopes in packs.



A large pack costs £25
There are 1000 envelopes in each large pack.

A medium pack costs £18
There are 750 envelopes in each medium pack.

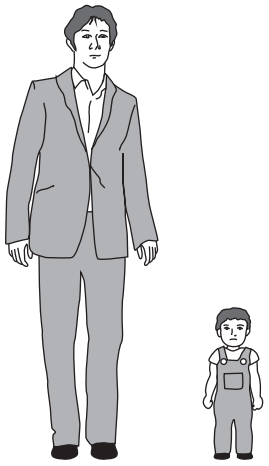
A small pack costs £7
There are 250 envelopes in each small pack.

Astrid needs to buy exactly 1500 envelopes.
She wants to buy the envelopes as cheaply as possible.

Which packs should Astrid buy?
You must show your working.

(Total for Question 10 is 5 marks)

11 The picture shows a child and a man.



The man is of normal height.
The child and the man are drawn to the same scale.

(a) Write down, in metres, an estimate for the real height of the man.

..... m

(1)

(b) Work out, in centimetres, an estimate for the real height of the child.

..... cm

(3)

(Total for Question 11 is 4 marks)

12 $p = 5s - 2t$

$s = 4$
$t = 3$

(a) Work out the value of p.

$p =$ .....

(2)

$y = x^2$
$x = -5$

(b) Work out the value of y.

$y =$ .....

(1)

(Total for Question 12 is 3 marks)

13 Here is a list of ingredients for making apple crumble for 2 people.

Apple Crumble
for 2 people

10 ounces apples
4 ounces flour
2 ounces sugar
1 ounce butter
1 tablespoon water
1 teaspoon baking powder

1 ounce	=	28 grams
1 tablespoon	=	15 m*l*
1 teaspoon	=	5 m*l*

Anne is going to make apple crumble for 5 people.

(a) Work out how much flour she needs.
Give your answer in grams.

..... grams
(3)

David is making an apple crumble.
He uses 140 grams of butter.

(b) Work out how many people he is making apple crumble for.

.....

(2)

(Total for Question 13 is 5 marks)

14 Here is a right-angled triangle.

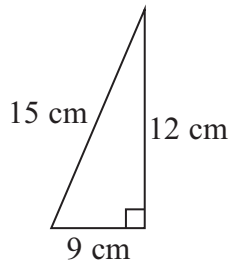


Diagram **NOT** accurately drawn

The shape below is made from 4 of these triangles.

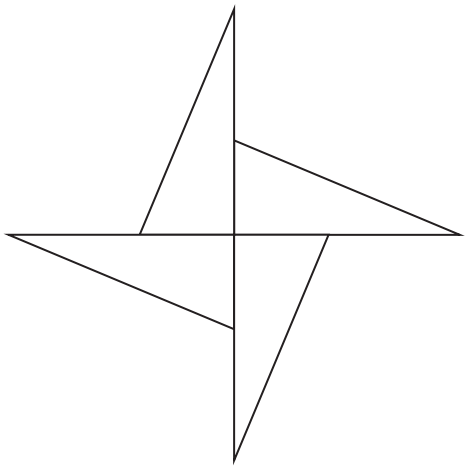


Diagram **NOT** accurately drawn

(a) Work out the area of the shape.

..... cm^2

(3)

(b) Work out the perimeter of the shape.

..... cm

(3)

(Total for Question 14 is 6 marks)

***15**

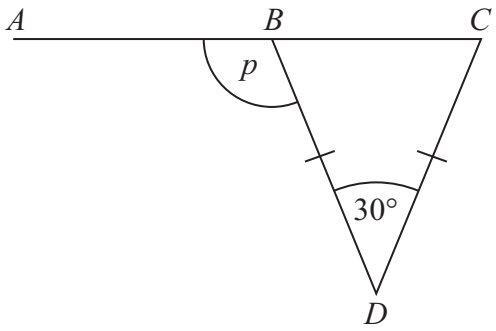


Diagram **NOT** accurately drawn

ABC is a straight line.
BD = *CD*.
Angle *BDC* = 30°.

Work out the size of the angle marked *p*.
You must give reasons for your answer.

(Total for Question 15 is 4 marks)

16 Richard's car uses 1 litre of petrol every 8 miles.
Petrol costs £1.30 per litre.

Richard drives 240 miles.

Work out the total cost of the petrol the car uses.

£ .....

(Total for Question 16 is 3 marks)

17 Factorise fully $7x - 28x^2y$

.....

(Total for Question 17 is 2 marks)

TOTAL FOR PAPER IS 60 MARKS

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