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

Wednesday 13 June 2012 – 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 ▶

P40640A

6/6/7/3

P 4 0 6 4 0 A 0 1 1 6

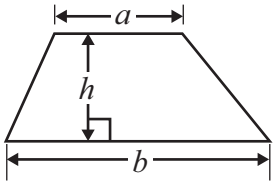
PEARSON

GCSE Mathematics 2MB01

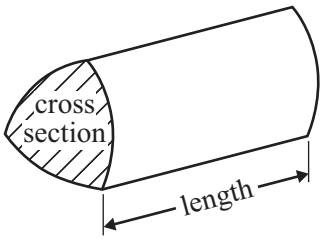
Formulae: Foundation Tier

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



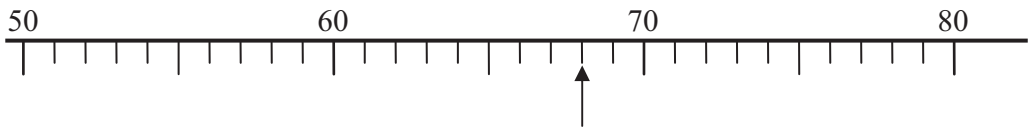
Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1



(a) Write down the number marked with an arrow.

.....

(1)

(b) Write the number **four million** in figures.

.....

(1)

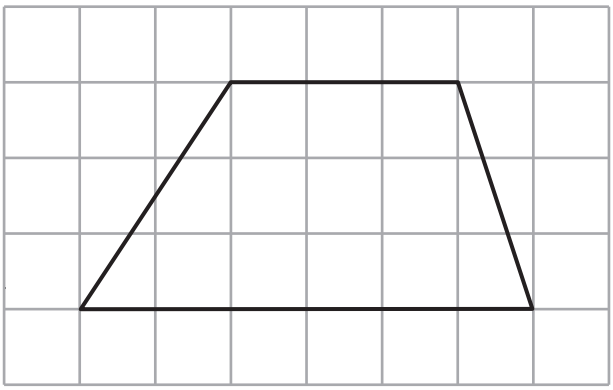
(c) Write down the value of the 7 in 43.765

.....

(1)

(Total for Question 1 is 3 marks)

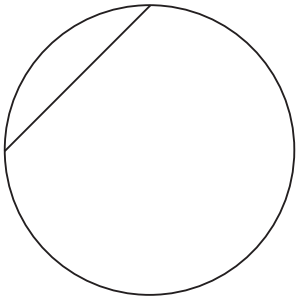
2 (a) Here is a quadrilateral.



Write down the mathematical name of this quadrilateral.

.....

(1)

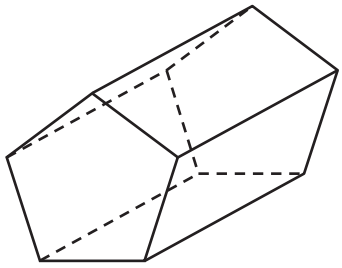


(b) Write down the mathematical name for the straight line inside this circle.

.....

(1)

(c) Here is a solid prism.



(i) Write down the number of faces.

..... faces

(ii) Write down the number of vertices.

..... vertices

(2)

(Total for Question 2 is 4 marks)

3 (a) Simplify $p + p + p + p + p$

.....

(1)

(b) Simplify $r \times s \times 4$

.....

(1)

(c) Simplify $2a + 3b + 5a - b$

.....

(2)

(Total for Question 3 is 4 marks)

---

4 Sophie goes to the market.

She buys 3 lettuces at 45p each,
2 kg of potatoes at 75p per kg,
500 g of cheese at £1.50 per 100 g.

Sophie pays with a £20 note.

How much change should she get?

£ .....

(Total for Question 4 is 4 marks)

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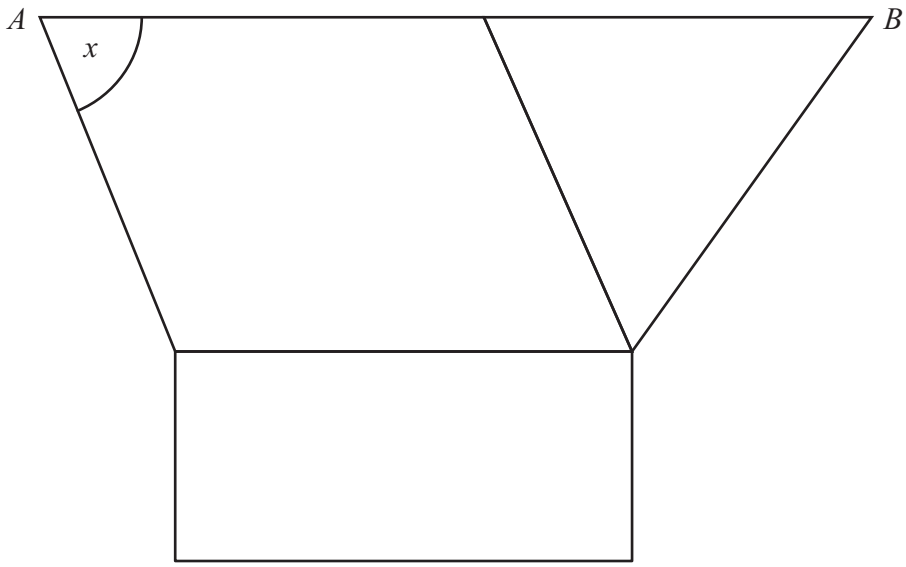
5 The diagram shows a rectangle, a parallelogram and a triangle.



(a) On the diagram,

(i) mark with arrows (>>) a pair of parallel lines,

(ii) mark with *P*s two lines that are perpendicular to each other.

(2)

(b) (i) Measure the length of the line *AB*.

..... cm

(ii) Measure the size of the angle marked *x*.

.....°

(2)

(Total for Question 5 is 4 marks)

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

6 10 14 18

(a) Write down the next term in this sequence.

.....

(1)

(b) Find the 10th term in this sequence.

.....

(1)

(c) The number 101 is **not** a term in this sequence.
Explain why.

.....

.....

(1)

(d) Write an expression, in terms of n, for the nth term of this sequence.

.....

(2)

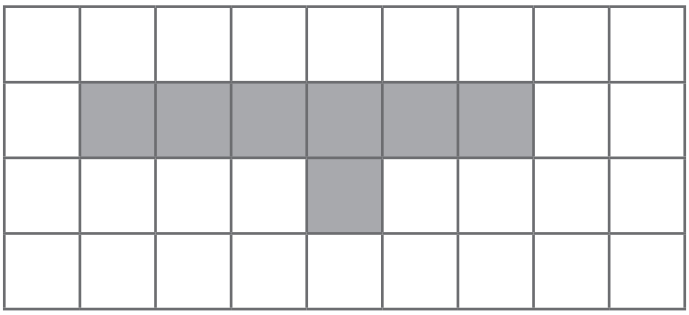
(Total for Question 6 is 5 marks)

7 What is 10% of £50?

£ .....

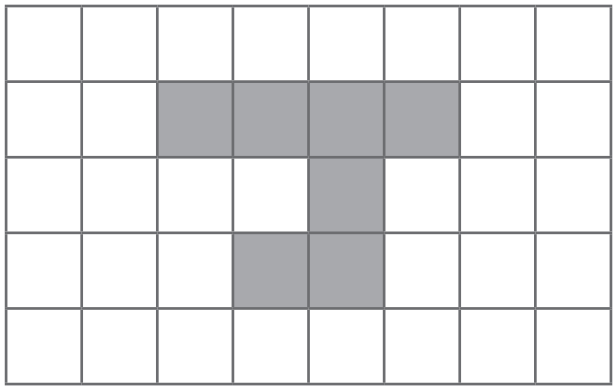
(Total for Question 7 is 1 mark)

8 (a) On the grid, shade in one more square so that the completed shape has one line of symmetry.



(1)

(b) On the grid below, shade in two more squares so that the completed shape has rotational symmetry of order 2



(1)

(Total for Question 8 is 2 marks)

9 Jeff lives in Bath.
He works in an office in London.

Jeff leaves his home in Bath at 07 10
He catches a train in Bath at 07 35

The train takes 1 hour 35 minutes to get to London.
It then takes Jeff 40 minutes to get to his office.

At what time does Jeff get to his office?

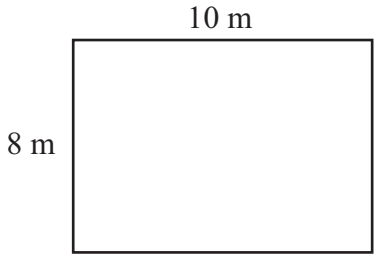
.....

(Total for Question 9 is 3 marks)

10 Dilys buys a new house.

She wants to have a lawn in the back garden.
The lawn is going to be in the shape of a rectangle.

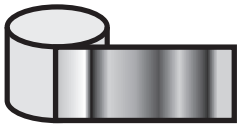
Diagram **NOT** accurately drawn



The lawn will have a length of 10 m.
The lawn will have a width of 8 m.

Edging strip

£1.50 per metre



Dilys wants to buy edging strip for her lawn.
The length of the edging strip needs to be equal to the perimeter of her lawn.

Edging strip costs £1.50 per metre.

What is the total cost of the edging strip?

£ .....

(Total for Question 10 is 4 marks)

***11**

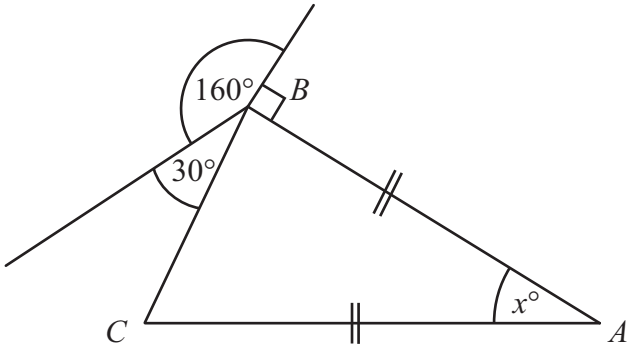


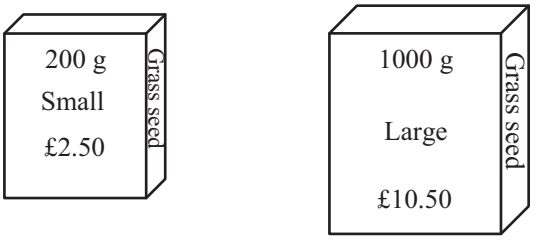
Diagram **NOT** accurately drawn

ABC is an isosceles triangle.

Work out the size of the angle marked $x°$.
Give reasons for your answer.

(Total for Question 11 is 5 marks)

*12 Nilmini is going to buy some grass seed.



Grass seed is sold

in 200 g boxes costing £2.50 each,
in 1000 g boxes costing £10.50 each.

Which box of grass seed gives the better value for money?
You must show all your working.

(Total for Question 12 is 3 marks)

13 (a) Work out $\frac{2}{5} \times \frac{3}{8}$

Give your answer in its simplest form.

.....

(2)

(b) Work out $\frac{3}{8} + \frac{1}{4}$

.....

(2)

(Total for Question 13 is 4 marks)

14 (a) Expand and simplify $5(x + 7) + 3(x - 2)$

.....

(2)

(b) Factorise completely $3a^2b + 6ab^2$

.....

(2)

(Total for Question 14 is 4 marks)

15 Here is part of Jo's electricity bill.

Electricity Bill

May 2012

J. Evans
3 Hillside Ave
London

CP Energy
Connecting people
Connecting places

2012

Reading 1st Jan	02792 units
Reading 1st April	03307 units
Number of units used	515 units

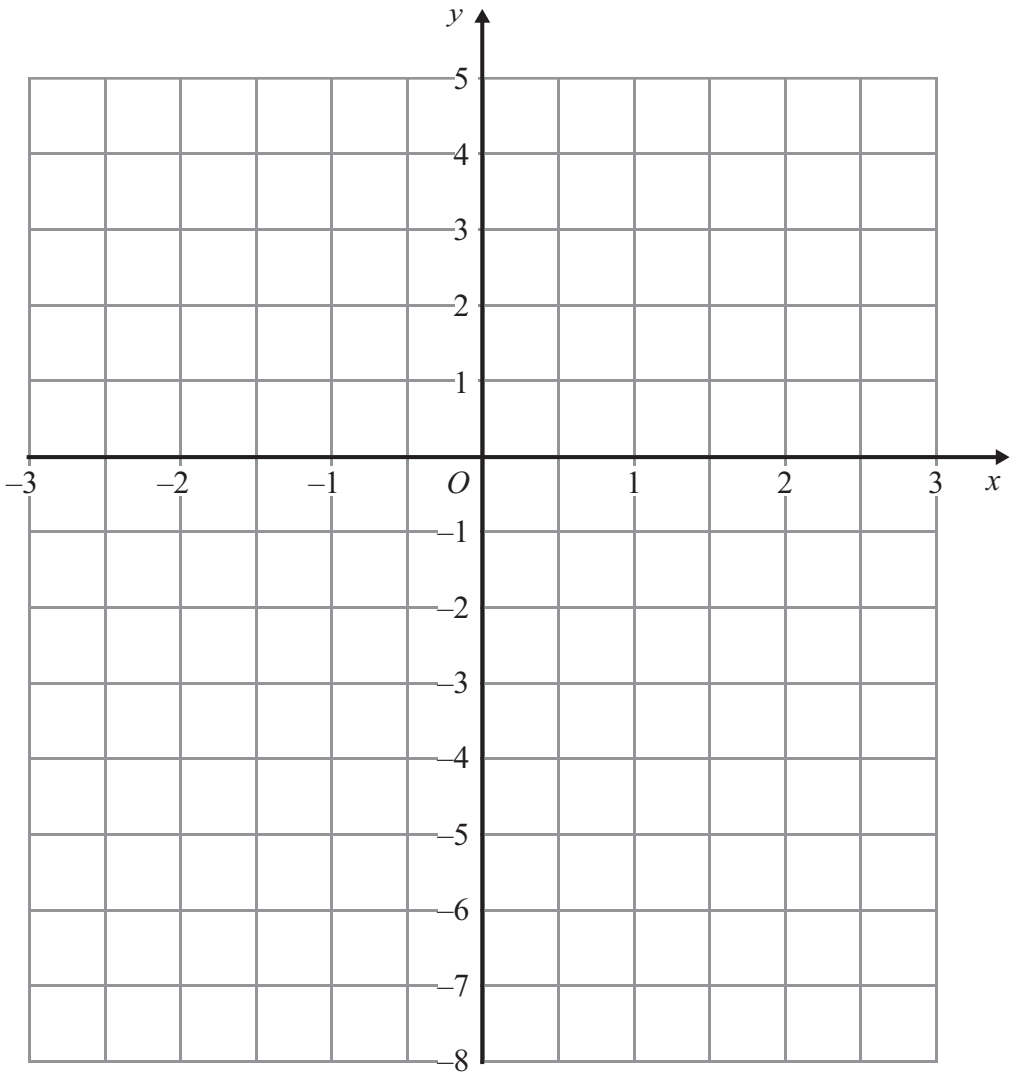
Cost: 35p per unit

Work out how much Jo has to pay for the units she has used.

£ .....

(Total for Question 15 is 4 marks)

16 On the grid, draw the graph of $y = 2x - 3$ for values of x from –2 to 2



(Total for Question 16 is 3 marks)

17 The diagram shows a triangular prism.

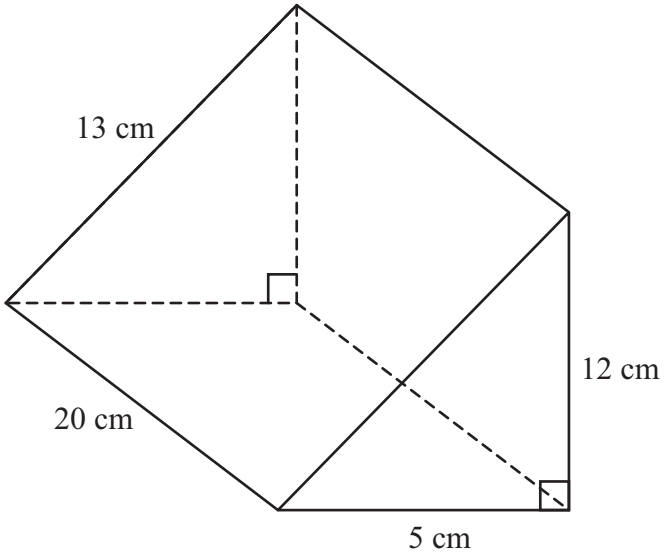


Diagram **NOT** accurately drawn

Work out the total surface area of the prism.

..... cm^2

(Total for Question 17 is 3 marks)

TOTAL FOR PAPER IS 60 MARKS

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