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 13 June 2014 – 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 ▶

P43408A

5/5/5/2/c2/

P 4 3 4 0 8 A 0 1 1 6

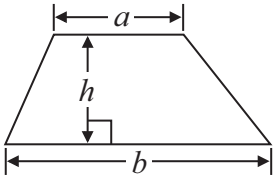
PEARSON

GCSE Mathematics 2MB01

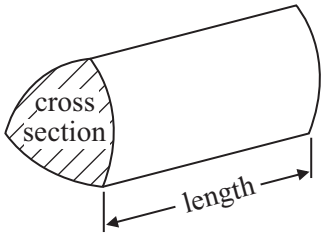
Formulae: Foundation Tier

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



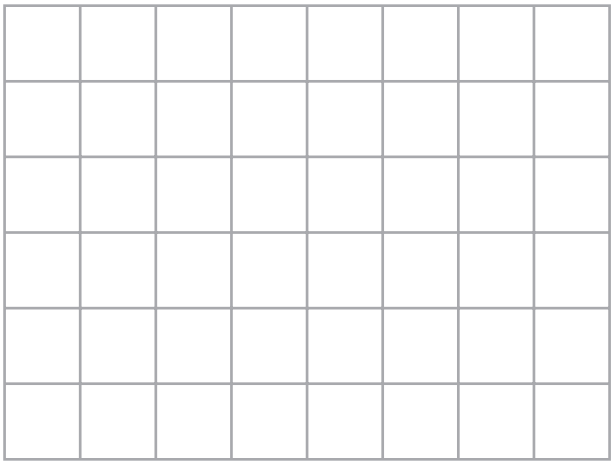
Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

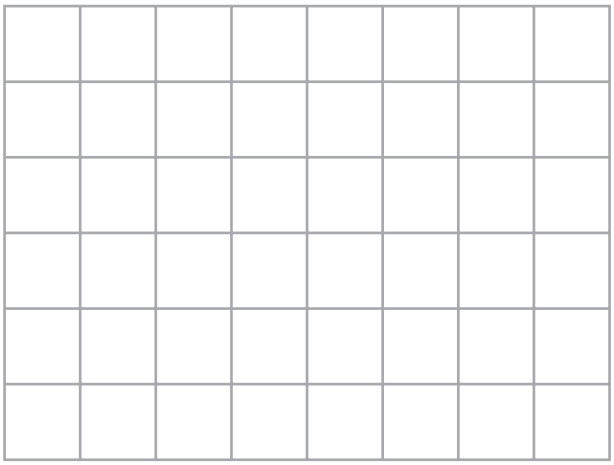
You must NOT use a calculator.

1 (a) On the centimetre grid, draw a right-angled triangle.



(1)

(b) On the centimetre grid, draw a rectangle with an area of 12 cm^2.

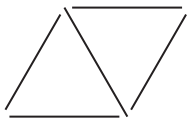


(2)

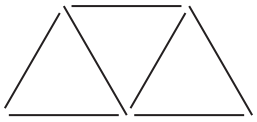
(Total for Question 1 is 3 marks)

2 Here are some patterns made from sticks.

Pattern number 1



Pattern number 2



Pattern number 3

(a) In the space below, draw Pattern number 4

(1)

(b) Complete the table.

Pattern number	1	2	3	4	5
Number of sticks	3	5	7		

(1)

(c) How many sticks make Pattern number 15?

.....

(1)

Maria wants to work out how many sticks make Pattern number 50

(d) Write down a method she can use.

.....

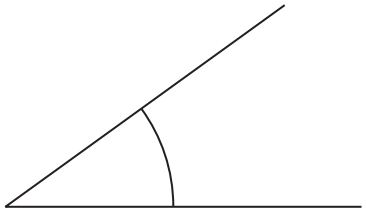
.....

.....

(1)

(Total for Question 2 is 4 marks)

3 Here is an angle.

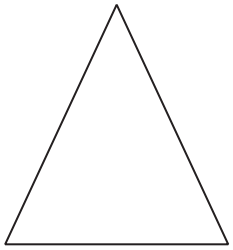


(a) Write down the mathematical name for this angle.

.....

(1)

The triangle below has exactly one line of symmetry.



(b) Draw the line of symmetry on this triangle.

(1)

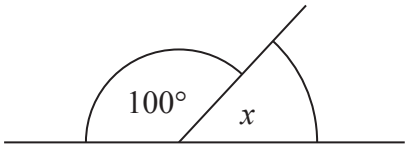


Diagram **NOT** accurately drawn

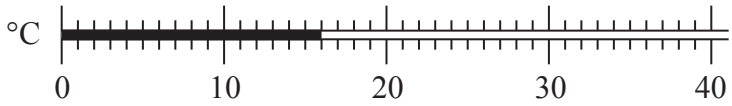
(c) Write down the size of the angle marked x.

.....°

(1)

(Total for Question 3 is 3 marks)

4 The thermometer shows a temperature.



Butter starts to melt at a temperature of 35 °C.

How many degrees does the temperature shown have to rise so that butter starts to melt?

.....°C

(Total for Question 4 is 2 marks)

5 Sally uses her van to deliver boxes to shops.
She can put a maximum weight of 450 kg in the van.

Sally has to deliver 50 boxes to a shop.
Each box has a weight of 30 kg.

Work out the least number of times Sally has to drive to the shop to deliver all 50 boxes.
You must show all your working.

.....

(Total for Question 5 is 3 marks)

6 Here is part of a train timetable from Manchester to London.

Manchester	06 27	07 15	07 35	08 15
Stockport	06 35	07 23	07 43	08 23
Stoke-on-Trent	07 06	07 50	08 12	08 50
London	09 34	09 23	09 52	10 23

A train leaves Stockport at 07 23

(a) At what time should this train get to London?

.....

(1)

Martin gets to the station at Stoke-on-Trent at 08 15

(b) How many minutes should he have to wait for the next train to London?

..... minutes

(1)

On Thursday the 07 43 train leaves Stockport and makes an extra call at Macclesfield 13 minutes later.
This extra stop at Macclesfield will make the train get to Stoke-on-Trent and London 5 minutes later than shown on the timetable above.

(c) Complete the timetable for this train.

Manchester	07 35
Stockport	07 43
Macclesfield	.....
Stoke-on-Trent	.....
London	.....

(3)

(Total for Question 6 is 5 marks)

7 (a) Write the number 20 400 in words.

.....

(1)

(b) Work out 3×-7

.....

(1)

(c) Work out $3 \times (2 + 7)$

.....

(1)

(d) Find the value of 2^4

.....

(1)

Here is a list of numbers.

4 5 8 9 12

(e) From the list, write down the prime number.

.....

(1)

(f) Write the ratio 2 : 6 in its simplest form.

.....

(1)

(Total for Question 7 is 6 marks)

8 A school shop sells fruit bars for 50p each.

On Monday the shop sold 20 fruit bars.
On Tuesday the shop sold fruit bars with a total value of £13.50

The shop sold more fruit bars on Tuesday than on Monday.

(a) How many more?

.....

(3)

The table shows all the things sold in the shop.

Snacks		Drinks	
Fruit bar	50p	Lemon drink	50p
Cereal bar	65p	Water	75p
Chocolate bar	£1.20	Fruit carton	95p

Katie has two £1 coins and three 20p coins.
She has no other money.
She buys 3 cereal bars and a lemon drink.

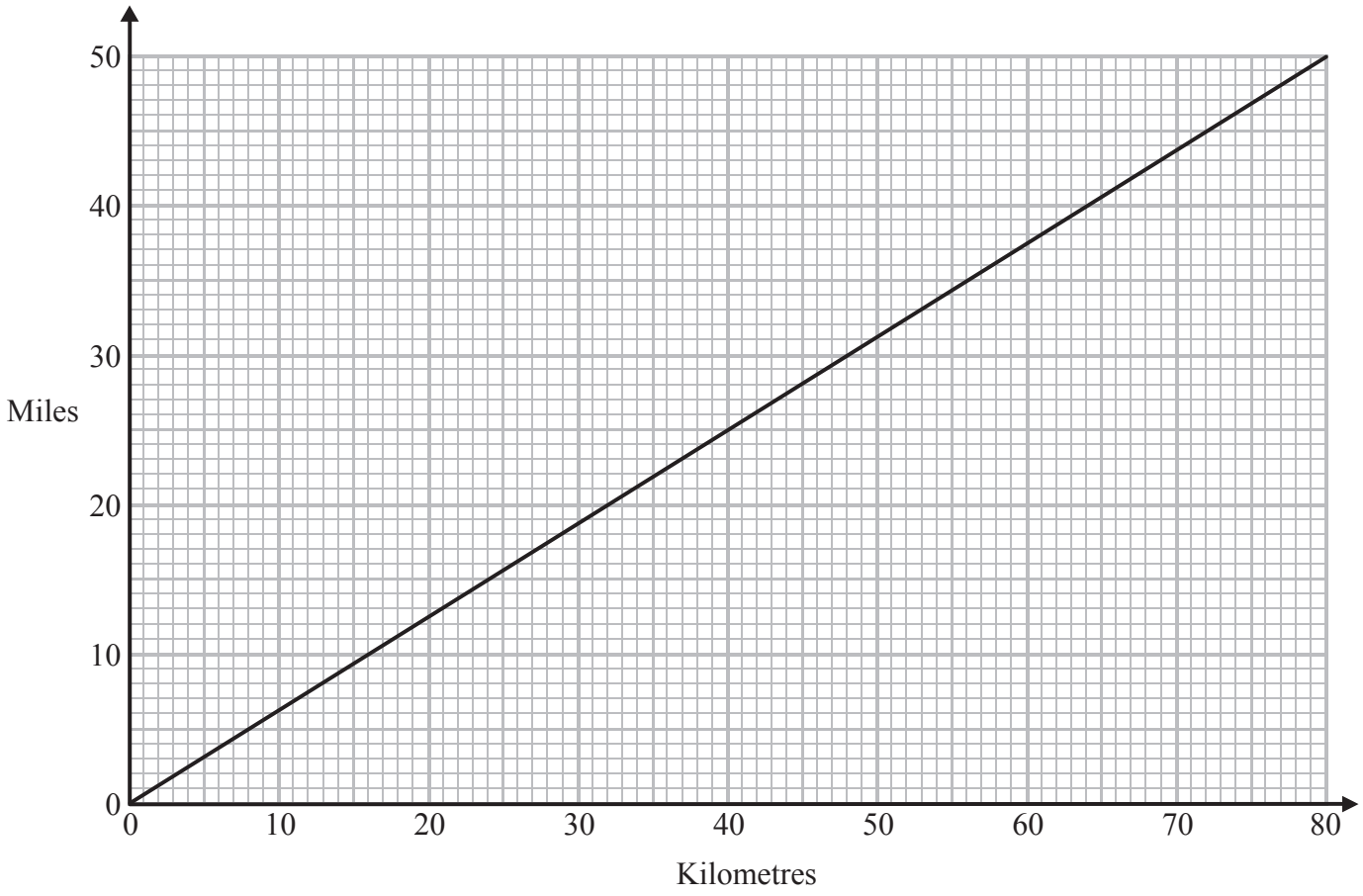
*(b) Does Katie have enough money left to buy a fruit bar?

You must show all your working.

(4)

(Total for Question 8 is 7 marks)

9 You can use this conversion graph to change between miles and kilometres.



(a) Change 40 km into miles.

..... miles

(1)

(b) Change 35 miles into km.

..... km

(1)

Mary has to drive from Paris to Calais, and then from Dover to Sheffield.
The total distance she has to drive is 350 miles.

Mary has already driven 240 km from Paris to the ferry at Calais.
She goes on a ferry to Dover.
She now has to drive from Dover to Sheffield.

Mary has enough petrol to drive 180 miles.

*(c) Will Mary have to stop for petrol on the way to Sheffield?

(4)

(Total for Question 9 is 6 marks)

10 (a) Simplify $5a - 2a$

.....

(1)

(b) Simplify $3 \times 4y$

.....

(1)

(c) Simplify $3e + 4f + 2e - f$

.....

(2)

(Total for Question 10 is 4 marks)

11 (a) Write $\frac{2}{5}$ as a percentage.

.....%

(1)

(b) Work out an estimate for 113×185

.....

(2)

(Total for Question 11 is 3 marks)

12 (a) Simplify $x^2 \times x^4$

.....

(1)

(b) Simplify $y^8 \div y^6$

.....

(1)

(Total for Question 12 is 2 marks)

13 There are 120 bricks in a box.
The bricks are red or blue or green.

$\frac{1}{3}$ of the bricks are red.

$\frac{1}{4}$ of the bricks are blue.

Work out the number of green bricks in the box.

.....

(Total for Question 13 is 4 marks)

14 Ali has some packets.

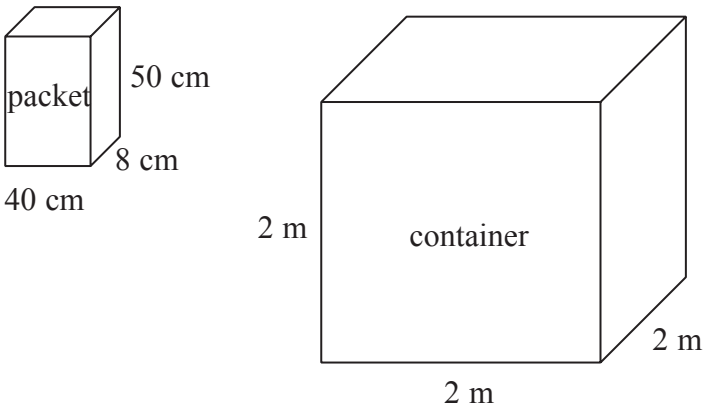


Diagram **NOT** accurately drawn

Each packet has dimensions 40 cm by 8 cm by 50 cm.

Ali fills a container with these packets.
The container is a cube of side 2 m.

Ali fills the container completely with these packets.

Work out the number of packets.

.....

(Total for Question 14 is 4 marks)

***15**

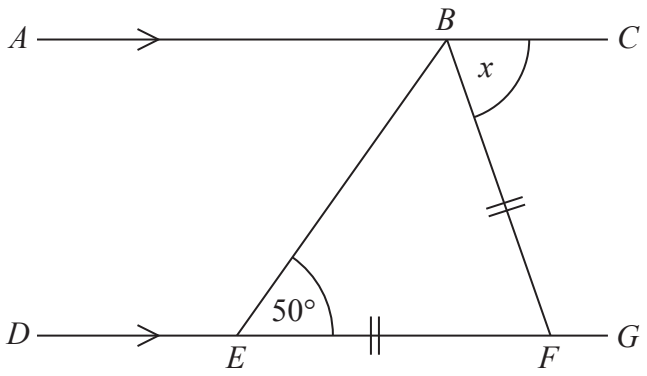


Diagram **NOT** accurately drawn

ABC is a straight line.
DEFG is a straight line.
AC is parallel to *DG*.
EF = *BF*.
Angle *BEF* = 50°.

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

°

(Total for Question 15 is 4 marks)

TOTAL FOR PAPER IS 60 MARKS

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