Write your name here

Surname

Other names

Centre Number   Candidate Number

Edexcel GCSE

Mathematics A
Paper 1 (Non-Calculator)

Foundation Tier

Mock Paper
Time: 1 hour 45 minutes

Paper Reference
1MA0/1F

You must have:
Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

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 100.
- 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
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

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.

S39261A
©2010 Edexcel Limited.

S39261A0121

edexcel
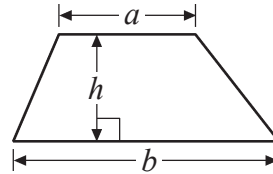advancing learning, changing lives
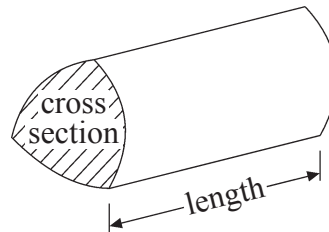
GCSE Mathematics 1MA0

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.

1 (a) Write the number **2670** in words.

(1)

....

(b) Write **sixty thousand two hundred and fifty seven** in figures.

(1)

....

(c) Write **4567** to the nearest hundred.

(1)

....

(d) Write down the value of the **8** in the number 64 892

(1)

....

(Total for Question 1 = 4 marks)

2 The pictogram shows the numbers of pizzas delivered by a pizza shop on Monday, Tuesday and Wednesday.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:

⬡ represents 8 pizzas

(a) Work out the number of pizzas delivered on Monday.

(1)

....

(b) Work out the number of pizzas delivered on Wednesday.

(1)

....

The shop delivered 24 pizzas on Thursday.
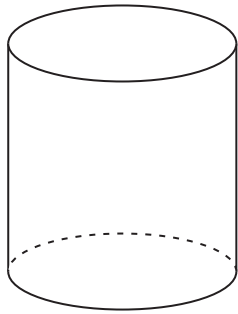The shop delivered 36 pizzas on Friday.

(c) Use this information to complete the pictogram.

(2)

(Total for Question 2 = 4 marks)

3 Write down the mathematical names of each of these 3-D shapes.

(i)

(ii)
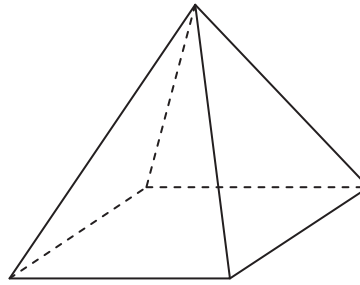
(i) ....

(ii) ....

(2)

(Total for Question 3 = 2 marks)

4 Here is a parallelogram.

(a) Write down the order of rotational symmetry of the parallelogram.

(1)

....

Here is a rectangle.

(b) On the rectangle, draw all the lines of symmetry.

(1)

(Total for Question 4 = 2 marks)

5 (a) Shade $\frac{2}{5}$ of this shape.

(b) Write 0.7 as a fraction.

(1)

....

(c) Write 0.34 as a percentage.

(1)

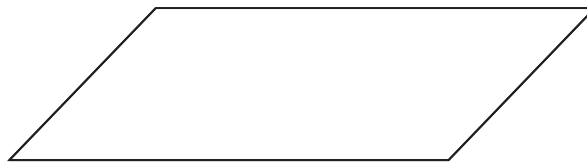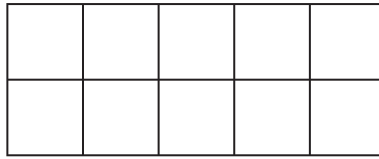... %

Maddie says that 0.3 is halfway between 20% and $\frac{4}{5}$

(d) Is Maddie correct?
    You must explain your answer.

(2)

....

....

(Total for Question 5 = 5 marks)

6 (a) Simplify $d + d + d + d + d$

(1)

....

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

(1)

....

(c) Simplify $6k + 3j - 2k + 5j$

(2)

....

(Total for Question 6 = 4 marks)

7
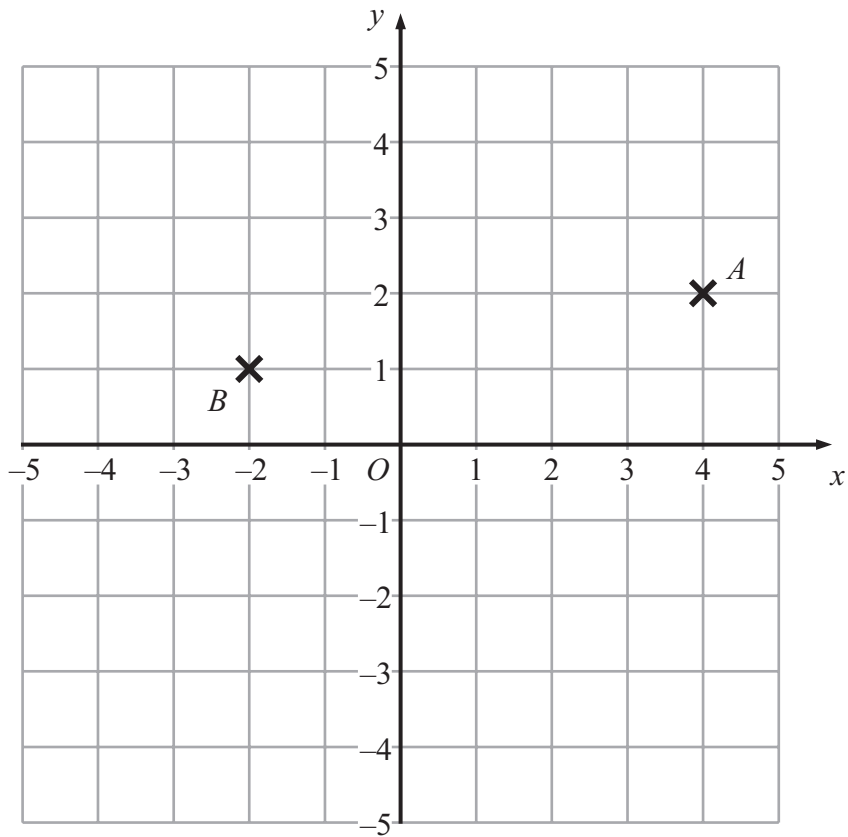
(a) Write down the coordinates of the point *A*.

(1)

(........................ , ...)

(b) Write down the coordinates of the point *B*.

(1)
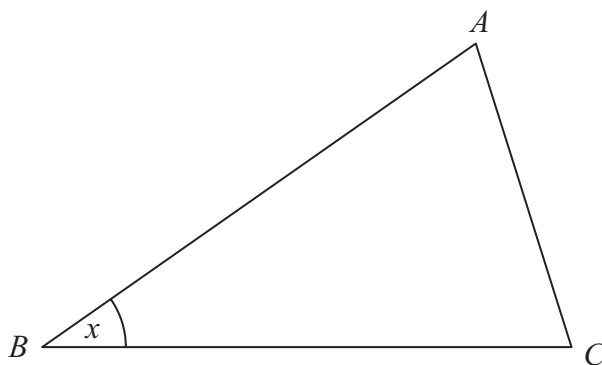
(........................ , ...)

(c) On the grid, mark the point (0, –4) with a cross (×).
Label this point *C*.

(1)

(Total for Question 7 = 3 marks)

8 Here is a triangle.

(a) Measure the length of the line *BC*.

(1)

.... cm

(b) Write down the special name for the angle marked *x*.

(1)

....

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

(1)

....

(d)

(3)
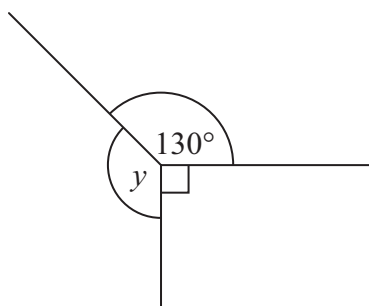
Diagram **NOT**
accurately drawn

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

°
....

(ii) Give a reason for your answer.

....

(Total for Question 8 = 6 marks)

9 Mr Harris takes his family to the cinema.

> **TICKET PRICES**
>
> Adult £7.50
> Child £4.50
>
> **Family (2 adults and 2 children) £22**

He buys tickets for 2 adults and 3 children.
He pays the least possible amount of money.

(a) What is the total cost of the tickets?

(3)

£...

Mr Harris pays with two £20 notes.

(b) How much change should he get?

(2)

£...

(Total for Question 9 = 5 marks)

10 (a) Solve $4x = 20$

(1)

$x =$ ....

(b) Solve $y - 8 = 13$

(1)

$y =$ ....

(c) Solve $3m + 7 = 34$

(2)

$m =$ ....
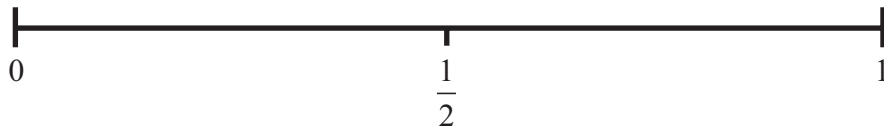
(Total for Question 10 = 4 marks)

11 You roll an ordinary 6-sided dice.

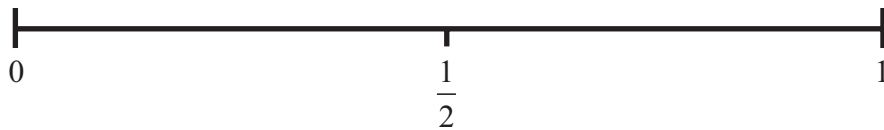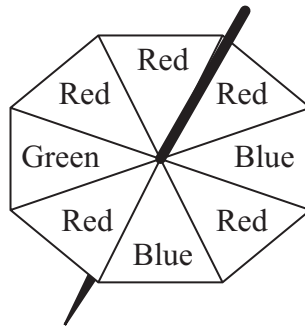(a) On the probability scale below, mark with a cross (×) the probability that you will get a 9

(1)

```
├──────────────────┼──────────────────┤
0                   1                  1
                    ─
                    2
```

You throw a fair 10p coin.

(b) On the probability scale below, mark with a cross (×) the probability that you will get a head.

(1)

```
├──────────────────┼──────────────────┤
0                   1                  1
                    ─
                    2
```

Here is a fair 8-sided spinner.

Jill is going to spin the spinner once.
The spinner will land on one of the colours.

(c) Which colour is the spinner most likely to land on?

(1)

....

(d) Write down the probability that the spinner will land on green.

(1)

....

(Total for Question 11 = 4 marks)

12 Here is part of a railway timetable.

Cambridge	08 25	08 45	08 54	09 26	09 50
Royston	08 46	08 59	09 15	09 43	10 04
Letchworth Garden City	09 00	09 09	09 29	09 54	10 14
Hitchin	09 04	-	09 33	09 58	-
Stevenage	09 10	-	09 39	10 03	-
Finsbury Park	09 41	-	10 09	10 21	-
London	09 50	09 42	10 18	10 30	10 46

A train leaves Cambridge at 09 26

(a) At what time should this train arrive in London?

(1)

....

A different train leaves Cambridge at 09 50

(b) Work out how many minutes this train should take to get to London.

(1)

.... minutes

Susan lives in Royston.
She has to be in Stevenage by 10 o'clock.

(c) What is the time of the latest train she can catch from Royston to arrive in Stevenage by 10 o'clock?

(1)

....

(Total for Question 12 = 3 marks)

13 The table shows some information about the number of hours of sunshine each day for five days in two towns.

	Monday	Tuesday	Wednesday	Thursday	Friday
Brighton	8	5	10	9	8
Cromer	6	7	8	4	2

Kevin wants to compare the number of hours of sunshine each day in Brighton with the number of hours of sunshine each day in Cromer.

On the grid, draw a suitable chart or diagram he could use.
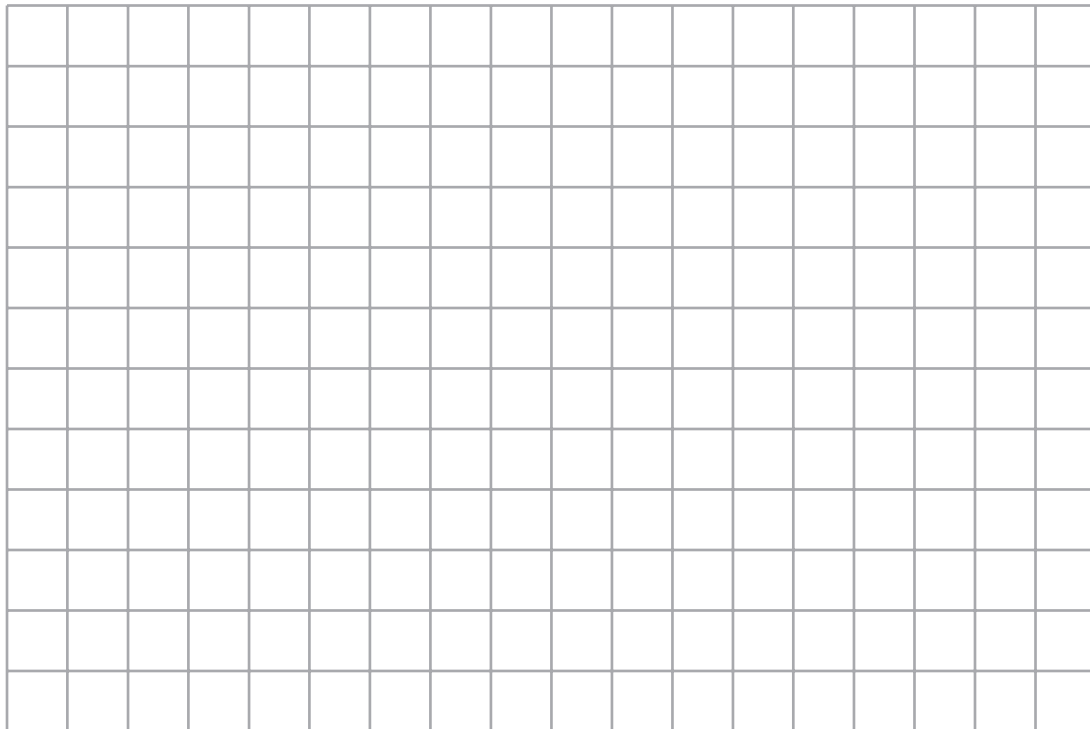
(Total for Question 13 = 4 marks)

14 Here are the first four terms of a number sequence

<div align="center">3   9   15   21</div>

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

....

    (ii) Explain how you worked out your answer.

(2)

....

  (b) Write down the 7th term in the sequence.

(1)

....

    Jean says 58 is in the sequence.

  (c) Is Jean correct? ....

    You must give a reason for your answer.

(1)

....

(Total for Question 14 = 4 marks)

*15 Sumire can record up to 40 hours of television programmes on her TV recorder.
She has already recorded 35 hours of programmes on the recorder.
She wants to keep all these recordings.

There are three more programmes Sumire wants to record.

Game show		50 minutes
Film	2 hours	40 minutes
Reality show	1 hour	35 minutes

Can Sumire record all three programmes on her TV recorder?
You must show all your working.

(Total for Question 15 = 4 marks)

16 Barry buys 20 books for £2 each.

He sells $\frac{1}{2}$ of the books for £3.50 each.

He sells $\frac{1}{4}$ of the books for £3 each.

He sells the rest of the books for £2 each.

Work out Barry's total profit.

£...
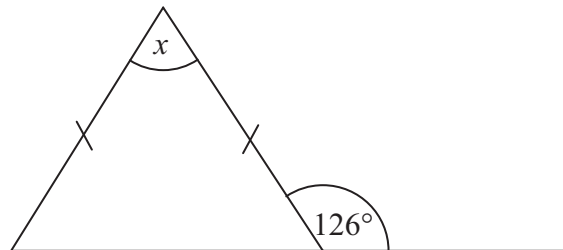
(Total for Question 16 = 4 marks)

*17

Diagram **NOT**
accurately drawn

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

....°

(Total for Question 17 = 4 marks)

18 The diagram shows a triangle and a square.
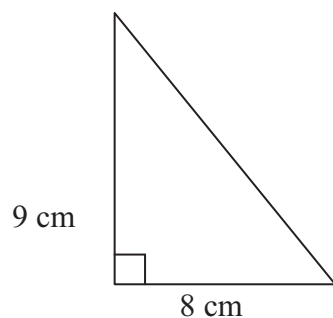
Diagrams **NOT** accurately drawn

9 cm

8 cm

The area of the triangle is the same as the area of the square.

Work out the **perimeter** of the square.

.... cm

(Total for Question 18 = 4 marks)

19 Work out $\dfrac{9}{10} - \dfrac{1}{5}$

....

(Total for Question 19 = 2 marks)

20 Mr Williams is organising a school trip.
Going on the school trip there will be

134 students from Year 8,
125 students from Year 9

and 30 adults.

Mr Williams must hire enough coaches so that everyone on the trip has a seat.

All the coaches that Mr Williams can hire seat 54 people.

What is the smallest number of coaches that Mr Williams has to hire?
You must show all your working.

....

(Total for Question 20 = 3 marks)

21 Guy wants to find out how much time people spend watching television.
He will design a questionnaire.

Design a suitable question for Guy's questionnaire.

(Total for Question 21 = 2 marks)

22 Janice asks 100 students if they like biology or chemistry or physics best.

   38 of the students are girls.
   21 of these girls like biology best.
   18 boys like physics best.
   7 out of the 23 students who like chemistry best are girls.

Work out the number of students who like biology best.

....

(Total for Question 22 = 4 marks)

23 Mrs Miller is planning a party for 70 children.
She will give each child a party bag to take home.
She will put a hat and a toy in each party bag.

    Party bags are sold in packs of 12
    Hats are sold in packs of 8
    Toys are sold in packs of 9

Mrs Miller buys the smallest possible number of packs of hats, toys and bags.

Mrs Miller can fill more party bags than she needs.
How many more?

....

(Total for Question 23 = 4 marks)

24 $V = 3b + 2b^2$

(a) Find the value of V when $b = -4$

(2)

....

(b) Simplify $m^6 \times m^7$

(1)

....

(Total for Question 24 = 3 marks)

25 Last year Kerry's take home pay was £15 000
She spent 40% of her take home pay on rent.

She used the rest of her take home pay for living expenses, clothes and entertainment in the ratio 3 : 1 : 2

How much did Kerry spend on entertainment last year?

£ ....

(Total for Question 25 = 4 marks)

26 (a) Express 120 as a product of its prime factors.

(2)

....

(b) Find the highest common factor (HCF) of 90 and 120

(1)

....

(Total for Question 26 = 3 marks)
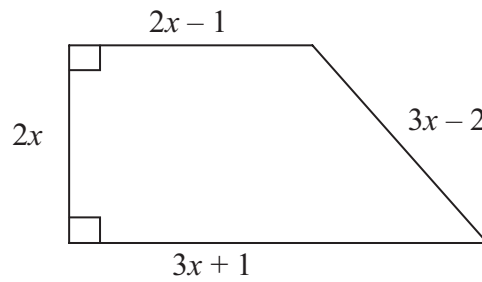
27 The diagram shows a trapezium.

Diagram **NOT** accurately drawn

In the diagram, all measurements are in centimetres.

The perimeter of the trapezium is 38 cm.

Work out the **area** of the trapezium.

.... cm^2

(Total for Question 27 = 5 marks)

TOTAL FOR PAPER = 100 MARKS