

Write your name here

Surname	Other names
---------	-------------

Centre Number

Candidate Number

Edexcel GCSE

Methods in Mathematics

Unit 1: Methods 1

For Approved Pilot Centres ONLY

Foundation Tier

Mock Paper Time: 1 hour 45 minutes	Paper Reference 5MM1F/01
--	------------------------------------

You must have:
Ruler graduated in centimetres and millimetres, protractor, 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 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.

Turn over ►

W39735A

©2011 Edexcel Limited.
6/6



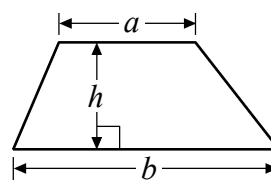
edexcel 
advancing learning, changing lives

GCSE Mathematics 2MM01

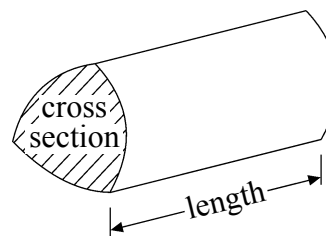
Formulae: Foundation Tier

**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 \times 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 8043 in words.

.....
(1)

(b) Write the number **sixteen thousand three hundred and seven** in figures.

.....
(1)

(c) Write down the value of the figure **7** in the number 8719

.....
(1)

(d) Write 5629 correct to the nearest hundred.

.....
(1)

(Total for Question 1 is 4 marks)



2 (a) Work out $519 + 185$

.....
(1)

(b) Work out $382 - 47$

.....
(1)

(c) Work out 543×6

.....
(1)

(d) Work out $24 - 10 \div 2$

.....
(1)

(Total for Question 2 is 4 marks)



3 Here are four cards, with a number written on each card.

5

8

2

7

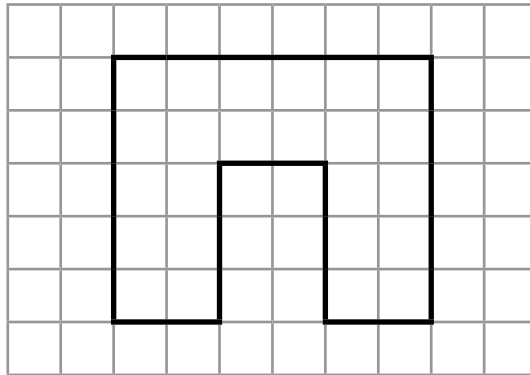
Use all 4 cards to make the largest 4 digit number.

(Total for Question 3 is 2 marks)



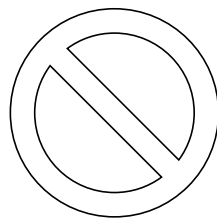
4 The shape below has one line of symmetry.

(a) Draw this line of symmetry.



(1)

The shape below has rotational symmetry.



(b) Write down the order of rotational symmetry.

.....
(1)

(Total for Question 4 is 2 marks)

5 (a) Simplify $b + b + b$

.....
(1)

(b) Simplify $4m + 8m$

.....
(1)

(c) Simplify $3k \times 2p$

.....
(1)

(d) Simplify $9x + 5y + 2x - 3y$

.....
(2)

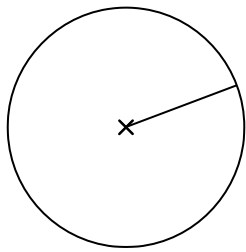
(Total for Question 5 is 5 marks)



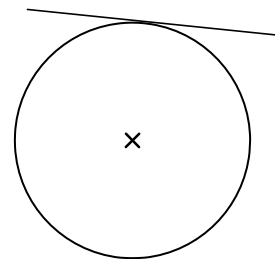
6 Here are 5 diagrams and 5 labels.
 In each diagram the centre of the circle is marked with a cross (×).
 Match each diagram to its label.
 One has been done for you.

Diagram

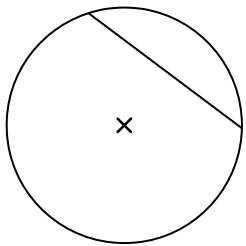
Label



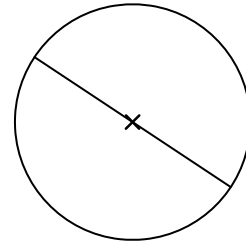
Circle and
tangent



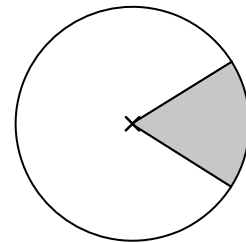
Circle and
chord



Circle and
sector



Circle and
radius



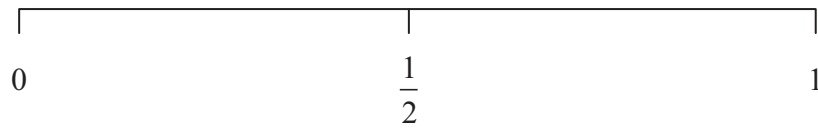
Circle and
diameter

(Total for Question 6 is 2 marks)



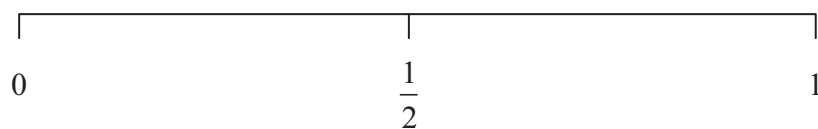
W 3 9 7 3 5 A 0 7 2 2

- 7 (a) On the probability scale, mark with a cross (×) the probability that when a fair coin is thrown it will land on tails.



(1)

- (b) On the probability scale, mark with a cross (×) the probability that when an ordinary dice is thrown it will land on the number 7



(1)

(Total for Question 7 is 2 marks)

- 8 (a) Write down **two** prime numbers that are both less than 100

.....
(2)

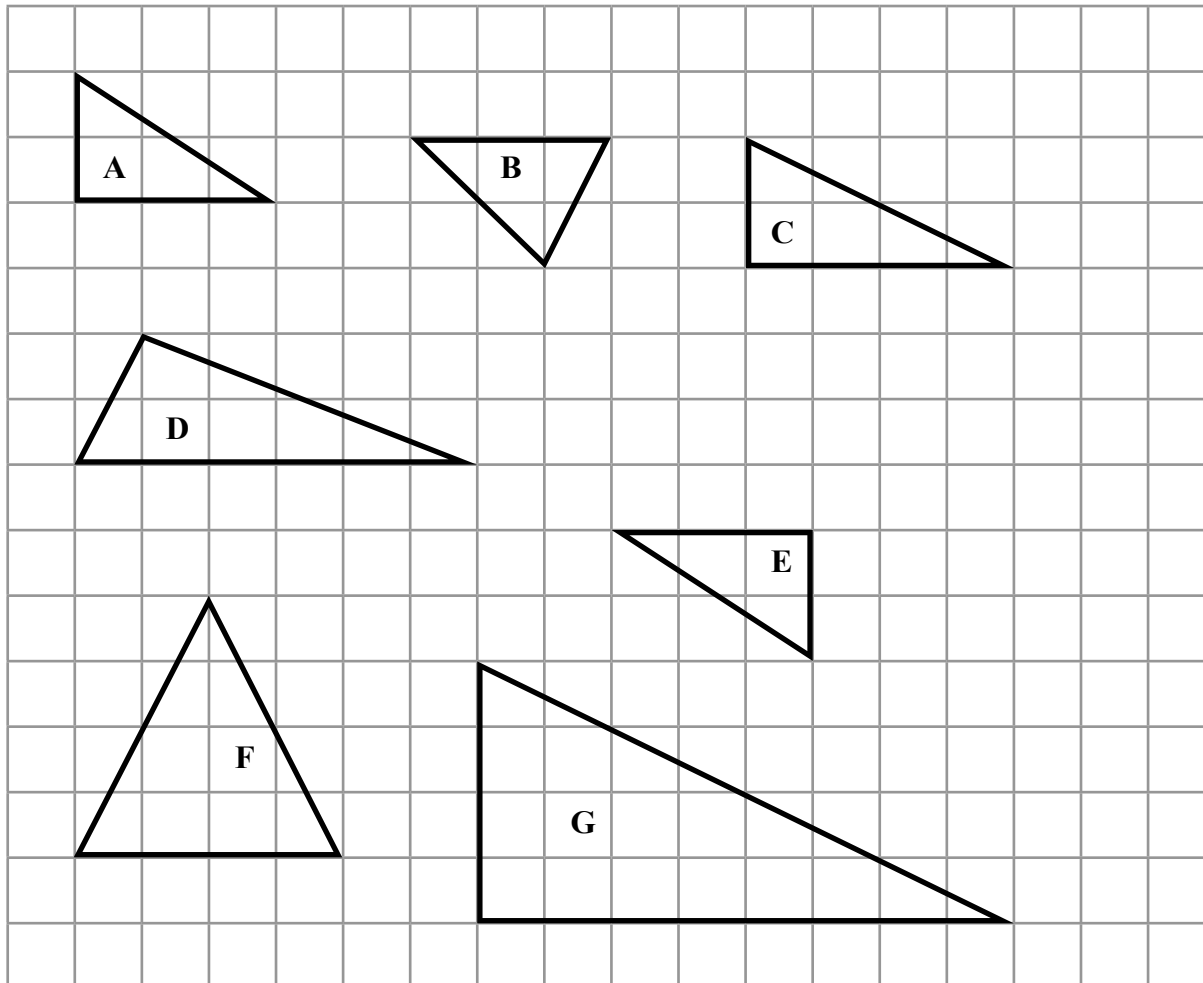
- (b) Find **two** square numbers that can be added together to make an odd number greater than 20

.....
(2)

(Total for Question 8 is 4 marks)



9 Here are seven triangles drawn on a square grid.



(a) Write down the letter of the isosceles triangle.

.....
(1)

Two of these triangles are congruent.

(b) Write down the letters of these two triangles.

..... and,
(1)

Triangle G is an enlargement of triangle C.

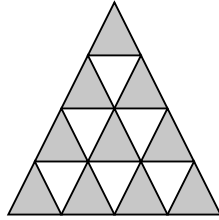
(c) Write down the scale factor of this enlargement.

.....
(1)

(Total for Question 9 is 3 marks)



10



- (a) What fraction of the large triangle is shaded?
Write your fraction in its simplest form.

.....
(2)

- (b) Write $\frac{13}{5}$ as a mixed number.

.....
(1)

- (c) Work out $\frac{1}{2} + \frac{3}{8}$

.....
(2)

(Total for Question 10 is 5 marks)

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

2 -5 -8 -1 0

.....
(1)

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

0.034 0.43 0.34 4.3 0.4

.....
(1)

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

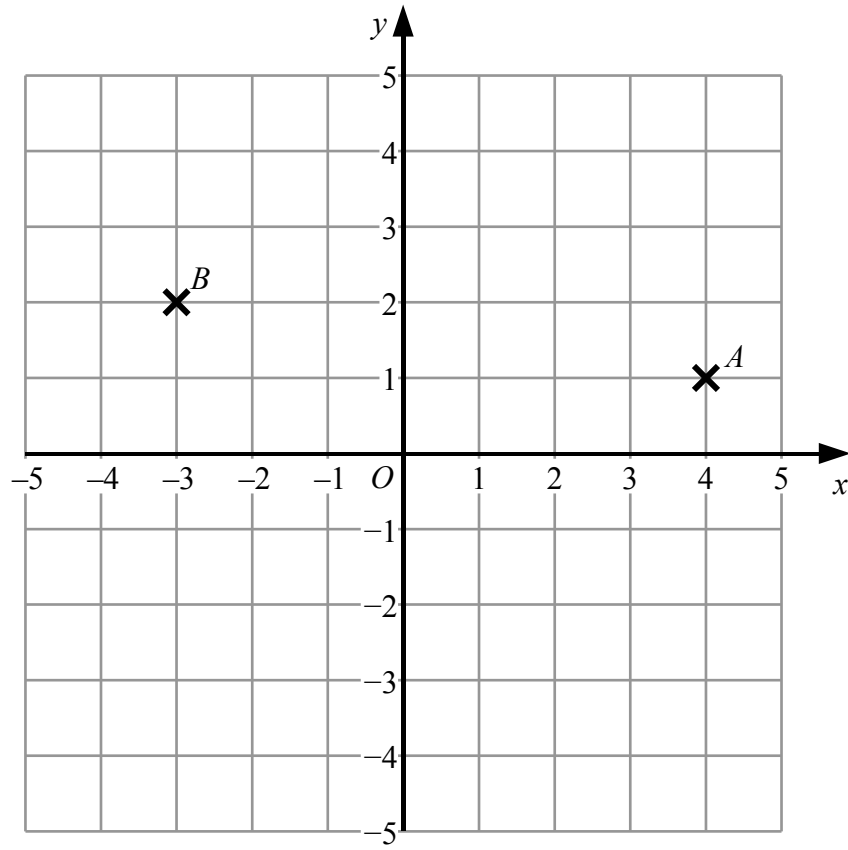
$\frac{3}{4}$ 0.8 7 0.68 $\frac{7}{10}$

.....
(2)

(Total for Question 11 is 4 marks)



12



(a) (i) Write down the coordinates of the point A .

(.....,))

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

(.....,))
(2)

(b) (i) On the grid, plot the point $(0, 3)$.
Label this point P .

(ii) On the grid, plot the point $(-1, -2)$.
Label this point Q .

(2)

(Total for Question 12 is 4 marks)



13



(a) Write down the mathematical name of this quadrilateral.

.....
(1)

(b) In the space below, draw a kite.

(1)

(c) Complete these sentences.

(i) A square has 4 equal sides and each angle is

(ii) A rectangle has lines of symmetry.

(iii) A is a quadrilateral having one pair of parallel sides.

(3)

(Total for Question 13 is 5 marks)



14 (a) Work out 40×20

.....
(1)

(b) Work out $81 \div 3$

.....
(1)

(c) Work out 356×42

.....
(3)

(Total for Question 14 is 5 marks)

15 (a) Solve $x + 7 = 12$

$x =$
(1)

(b) Solve $10y = 40$

$y =$
(1)

(c) Solve $5m + 6 = 41$

$m =$
(2)

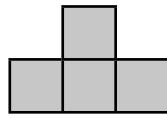
(Total for Question 15 is 4 marks)



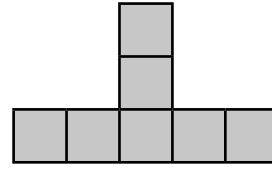
16 Here is a sequence of patterns made from squares.



Pattern number 1

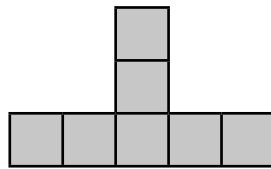


Pattern number 2



Pattern number 3

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



(1)

(b) Complete the table.

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

(1)

(c) How many squares are there in Pattern number 10?

.....

(1)

One of the patterns in the sequence has exactly 70 squares.

(d) What is the Pattern number?

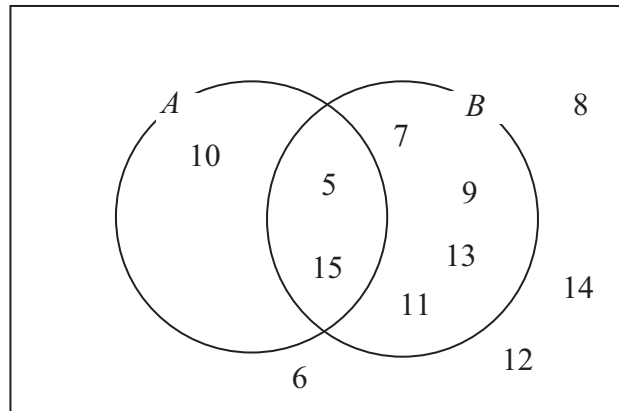
.....

(2)

(Total for Question 16 is 5 marks)



17 The Venn diagram shows the whole numbers from 5 to 15



(a) Complete this sentence.

The numbers in set A are all of 5

(1)

(b) List the numbers that are in set B .

.....

(2)

(c) List the numbers that are in both set A and set B .

$A \cap B =$

(1)

One of the numbers in the Venn diagram is chosen at random.

(d) Find the probability that the number will be in set A or in set B .

.....

(2)

(Total for Question 17 is 6 marks)



18

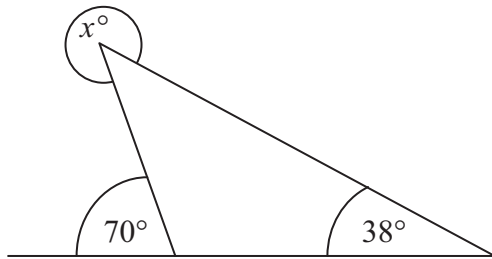


Diagram **NOT** accurately drawn

(a) Write down the name of the type of angle marked x° .

.....
(1)

*(b) Work out the value of x .
Give reasons for your answer.

(4)

(Total for Question 18 is 5 marks)

19

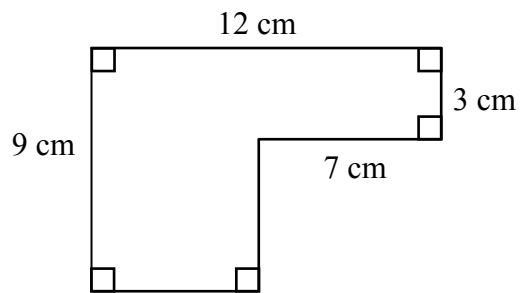


Diagram **NOT** accurately drawn

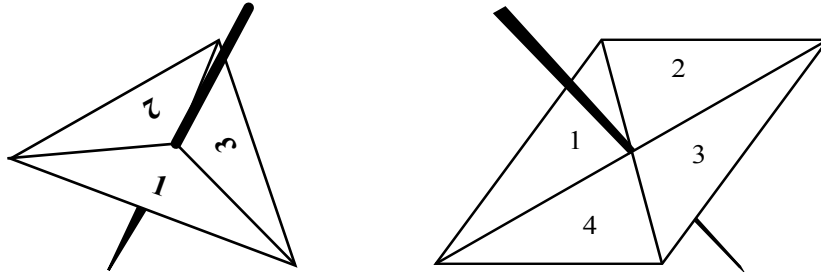
Work out the area of this shape.

..... cm²

(Total for Question 19 is 3 marks)



20 Jerry has a fair 3-sided spinner and a fair 4-sided spinner.



The sides of the 3-sided spinner are labelled 1, 2, 3
The sides of the 4-sided spinner are labelled 1, 2, 3, 4

Jerry spins each spinner once.
Each spinner lands on a number.
To get the score he adds the two numbers together.

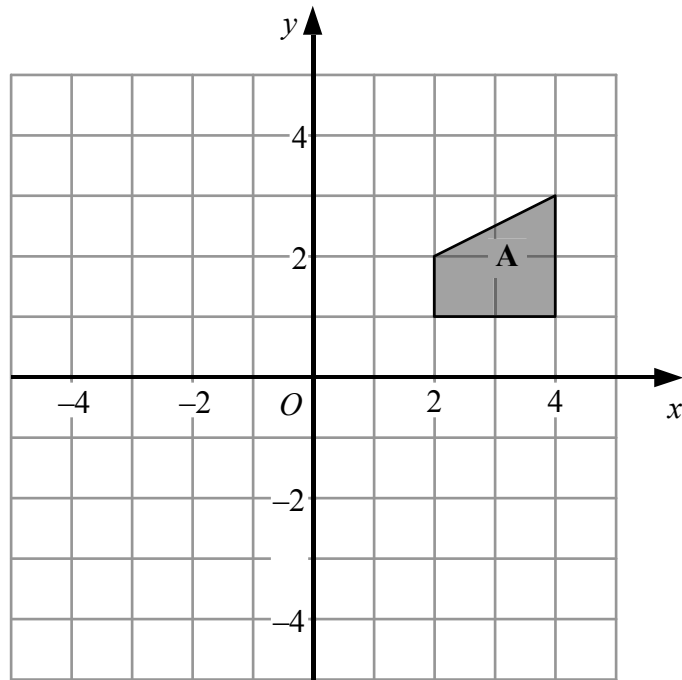
(i) Work out the probability that the score will be 4

(ii) Work out the probability that the score will be less than 5

(Total for Question 20 is 5 marks)

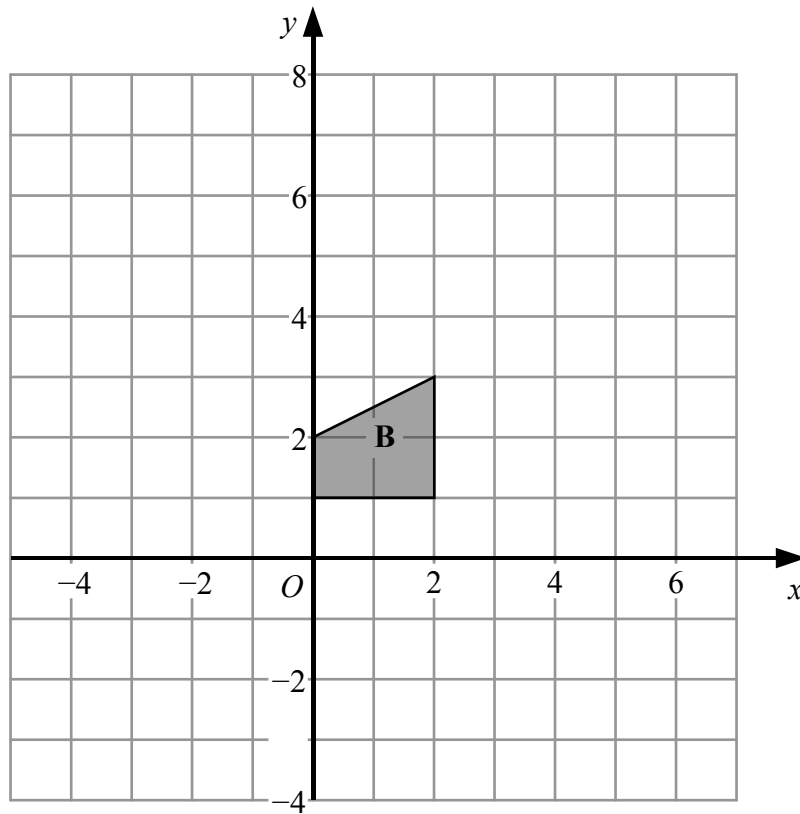


21



(a) On the grid, reflect shape **A** in the y axis.

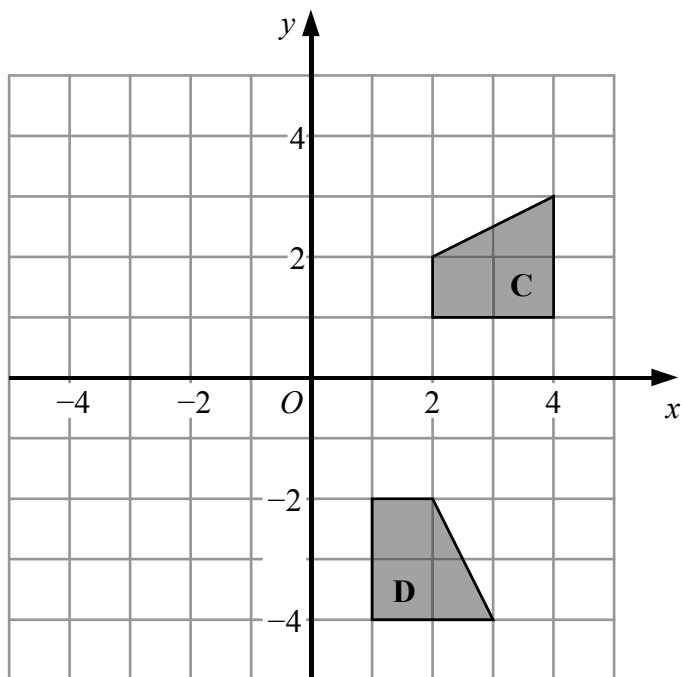
(2)



(b) On the grid, translate shape **B** by $\begin{pmatrix} 4 \\ -1 \end{pmatrix}$.

(1)





(c) Describe fully the single transformation that maps shape **C** onto shape **D**.

.....

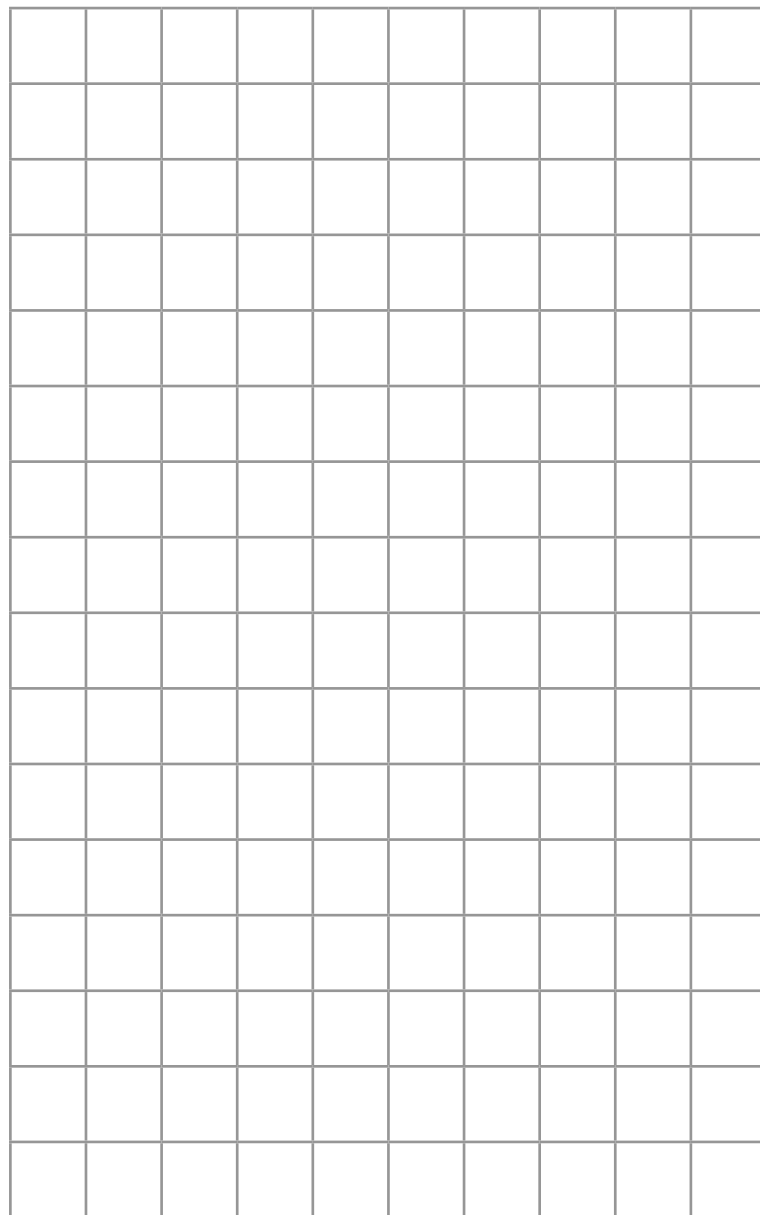
.....

(3)

(Total for Question 21 is 6 marks)



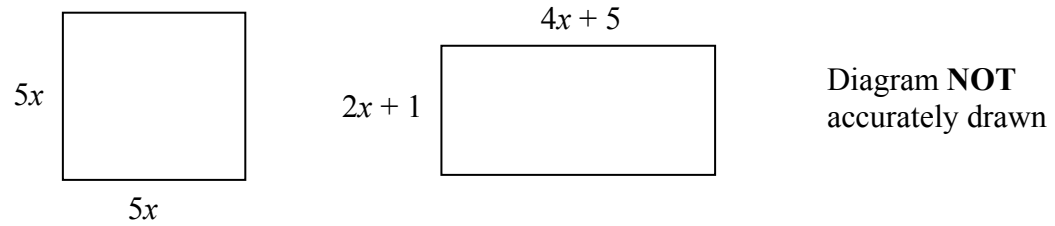
***22** On the grid, draw the graph of $y = 3x + 4$ for values of x from -2 to 2



(Total for Question 22 is 4 marks)



23 The diagram shows a square and a rectangle.



All measurements are given in centimetres.

The perimeter of the square is the same as the perimeter of the rectangle.

Work out the **area** of the rectangle.

..... cm^2

(Total for Question 23 is 5 marks)



24 Here is some information about the students in a class.

There are 36 students in the class.

28 of the students have brown hair.

7 of the students have brown hair and wear glasses.

3 of the students do **not** have brown hair and do **not** wear glasses.

(a) Draw a Venn diagram to show this information.

(4)

A student is chosen at random from the class.

(b) Work out the probability that this student has brown hair but does **not** wear glasses.

.....
(2)

(Total for Question 24 is 6 marks)

TOTAL FOR PAPER IS 100 MARKS

