Paper Reference

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Signature

Paper Reference(s)

1380/1F

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 1 (Non-Calculator)

Foundation Tier

Monday 7 June 2010 – Afternoon

Time: 1 hour 30 minutes

Materials required for examination	Items included with question papers
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser. Tracing paper may be used.	Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
You must NOT write on the formulae page.
Anything you write on the formulae page will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 28 questions in this question paper. The total mark for this paper is 100.
There are 24 pages in this question paper. Any blank pages are indicated.
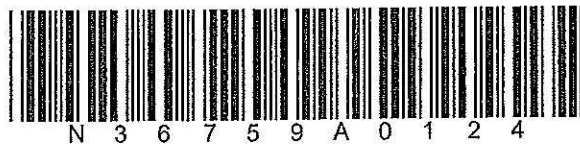**Calculators must not be used.**

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

Printer's Log. No.
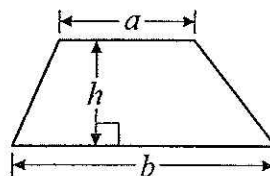
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Turn over

N 3 6 7 5 9 A 0 1 2 4

edexcel
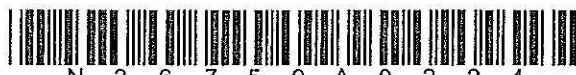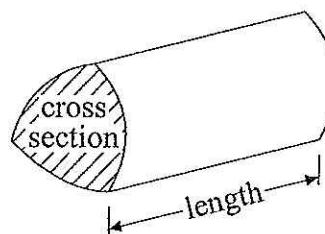advancing learning, changing lives

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 $= \frac{1}{2}(a+b)h$

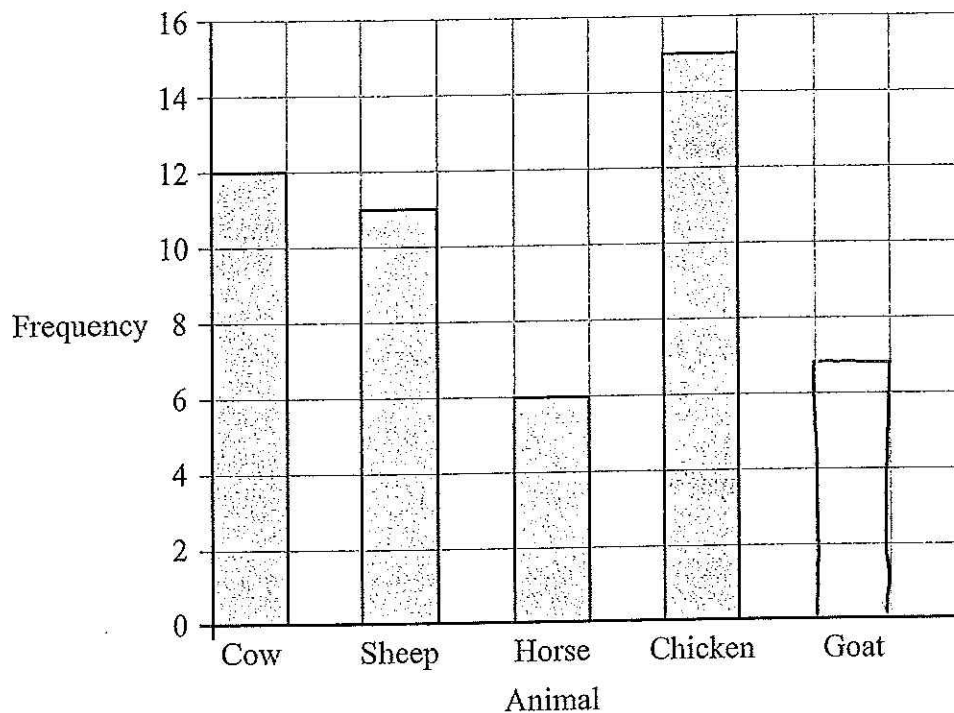**Volume of prism** = area of cross section × length

Answer ALL TWENTY EIGHT 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 bar chart gives information about the numbers of cows, sheep, horses and chickens on a farm.

(a) Write down the number of horses on the farm.

..................6.................
(1)

(b) Write down the number of sheep on the farm.

..................11.................
(1)

There are also 7 goats on the farm.

(c) Use this information to complete the bar chart.

(1)

(Total 3 marks)

2. (a) Write the number **fifteen thousand, six hundred and seventy two** in figures.

15 672

(1)

(b) Write the number 3020 in words.

three thousand and twenty

(1)

(c) Write the number 8196 to the nearest hundred.

8200

(1)

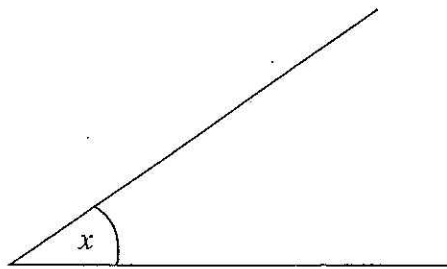(d) Write down the value of the 6 in the number 236 894

thousands

(1) **Q2**

(Total 4 marks)

3. (a) Measure the length of *PQ*.
Give your answer in centimetres.

P ——————————— Q

6·5 cm

(1)

(b) Measure the size of angle *x*.

36 °

(1)

(c) What type of angle is angle *x* ?

acute

(1) **Q3**

(Total 3 marks)

4. Write these numbers in order of size.
   Start with the smallest number.

   (a) 7, −2, −6, 1, −3

   −6, −3, −2, 1, 7

   (1)

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

   (b) 0.06, 0.35, 0.63, 0.3, 0.56

   0.06, 0.3, 0.35, 0.56, 0.63

   (1)

   Q4

   (Total 2 marks)

5. Kunal goes to a café.
   He can choose one drink and one snack.

Drinks	**Snacks**
Milk	Apple
Juice	Sandwich
Water	Biscuit

   One possible combination is (Milk, Apple).
   Write down all the possible combinations Kunal can choose.
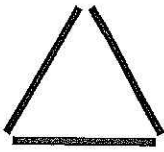   The first one has been done for you.

   (M, A) (M, S) (M, B) (J, A) (J, S) (J, B)

   (W, A) (W, S) (W, B)

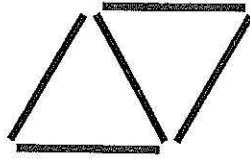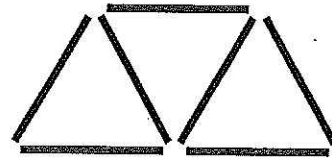   **Q5**

   (Total 2 marks)

6. Here are some patterns made from sticks.
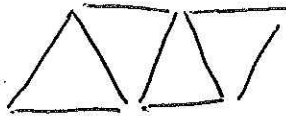
Pattern number 1   Pattern number 2   Pattern number 3

(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	9	11

(1)

(c) How many sticks are in Pattern number 12?

..............25..............

(1)

Ben wants to find the number of sticks in Pattern number 100

(d) Write down a method he could use.

..............$2 \times 100 = 200 + 1 = 201$..............

....

....

(1)

Q6

(Total 4 marks)

7. Here is a list of 8 numbers.

      4   7   10   16   18   20   21   32

From the numbers in the list write down a number that is

(i) an odd number

.........7.....

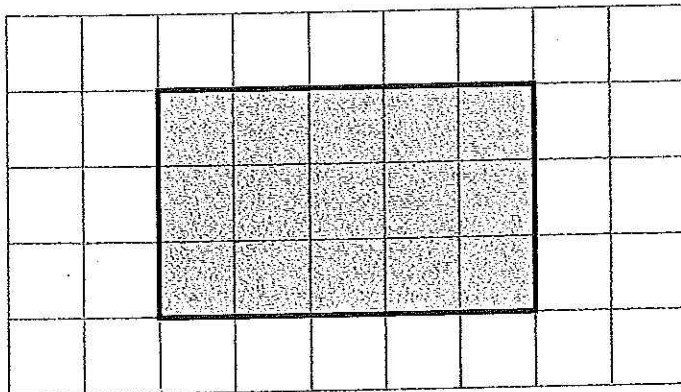(ii) a multiple of 5

.....20...

(iii) a square number

.....16...

(iv) a factor of 42

.....21.....

Q7

(Total 4 marks)

8. The diagram shows a shaded rectangle drawn on a centimetre grid.

(a) Find the area of the shaded rectangle.
State the units of your answer.

.........15 cm² .....
(2)

(b) Find the perimeter of the shaded rectangle.

.........16.........cm
(1)

Q8

(Total 3 marks)

9. The table shows some information about boxes of cereal on sale in a supermarket.

Cereal	Weight of 1 box	Cost of 1 box
Coco Pops	600 g	£2.79
Cornflakes	375 g	£1.26
Frosties	500 g	£1.55
Rice Krispies	600 g	£2.43
Shreddies	500 g	£1.85

(a) How much does a box of Frosties cost?

£ 1.55

(1)

A box of cereal has a weight of 375 g.

(b) Write down the name of this cereal.

Cornflakes

(1)

A box of cereal has a weight of 600 g and costs **less** than £2.50

(c) Write down the name of this cereal.

Rice krispies

(1)

Ed buys
        one box of Coco Pops
    and   **two** boxes of Shreddies.

(d) How much money in total does Ed spend?

$$
\begin{array}{r}
2\ 7\ 9 \\
+\ 1\ 8\ 5 \\
1\ 8\ 5 \\
\hline
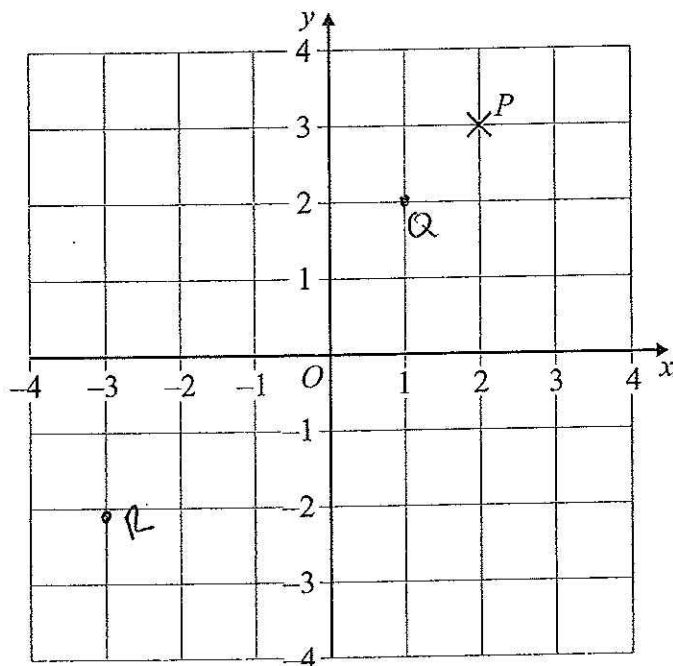6.4\ 9 \\
\hline
2\ \ 1
\end{array}
$$

£ 6.49

(2)

(Total 5 marks)

10.

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

(...2..., ...3...)

(1)

(b) (i) On the grid, plot the point (1, 2).
Label the point Q.

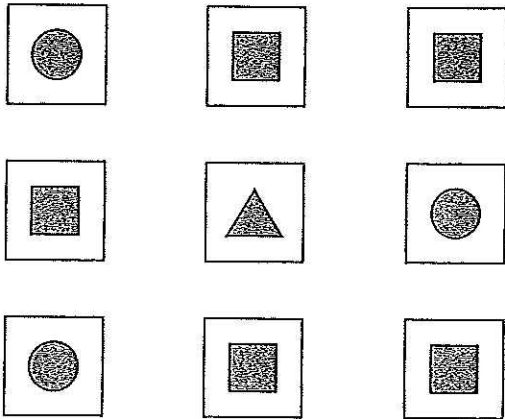(ii) On the grid, plot the point (−3, −2).
Label the point R.

(2)

Q10

(Total 3 marks)

11. James has 9 cards.
Each card has a shape drawn on it.
Each shape is a circle ⬤ or a square ▣ or a triangle ▲ .

James takes a card at random.

(i) Which shape is **most** likely to be on the card?

..........Square..........

(ii) What is the probability that James takes a card that has a square ▣ on it?

..........5/9..........

(Total 3 marks)

12. Alan recorded the numbers of text messages sent by 7 people one day.

| 6 | 9 | 15 | 4 | 8 | 12 | 6 |

(a) Find the mode.

..........6..........
(1)

(b) Work out the range.

$15 - 4 = 11$

..........11..........
(2)

(c) Find the median.

4, 6, 6, 8, 9, 12, 15

..........8..........
(1)

(Total 4 marks)

13. The table shows the percentage of each type of book in a library.

Type of book	Percentage
Children's	24%
General	42%
Mystery	13%
Romance	15%
Science fiction	2%
Thriller	4%

(a) What type of book has the smallest percentage?

Science Fiction

(1)

(b) Write 13% as a decimal.

0.13

(1)

(c) Write 24% as a fraction.
Give your answer in its simplest form.

$24/100$ $12/50$ $6/25$

$6/25$

(2)

There are 3000 books in the library.

(d) Work out 15% of 3000

10% = 300
5% = 150
15% = 450

450

(2)

(Total 6 marks)

14. Tanaka says 'When you multiply an odd number and an even number together, you will always get an odd number'.

Show that Tanaka is wrong.

$$3 \times 2 = 6$$

odd × even = even   Tanaka is wrong

(Total 2 marks)

15.

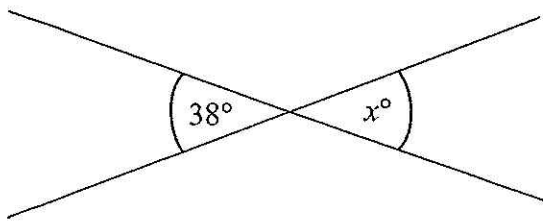Diagram **NOT** accurately drawn

(a) (i) Write down the value of x.

.........38°.........

(ii) Give a reason for your answer.
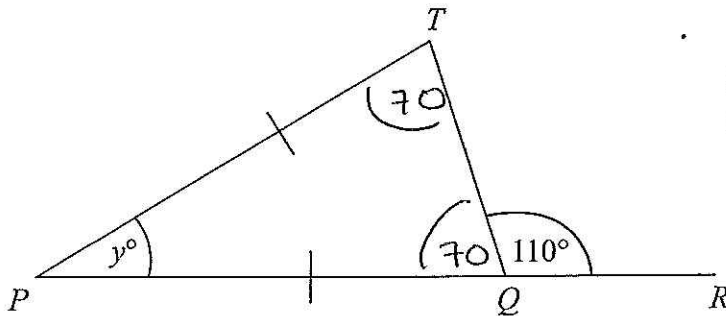
.....opposite angles are equal.....

(2)

Diagram **NOT** accurately drawn

PQR is a straight line.
$PT = PQ$.

(b) (i) Work out the value of y.

$180 - 110 = 70$

$70 + 70 = 140$

$180 - 140 = 40°$

.........40°.........

(ii) Give reasons for your answer.

angles on a straight line add up to 180°
2 angles are equal in an Isosceles
triangle angles in a triangle add to 180°

(4)

Q15

(Total 6 marks)

16. (a) Simplify $p + p + p + p$

............4p............
(1)

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

............m^3............
(1)

$B = 2k + 12$

$k = 5$

(c) Work out the value of B.

$2 \times 5 = 10$

$10 + 12 = 22$

$B =$ ....22............
(2)

$T = 4w - 2$

$T = 22$

(d) Work out the value of w.

$22 = 4w - 2$

$24 = 4w$

$24/4 = 6$

$w =$ ....6............
(2)

(Total 6 marks)

Q16

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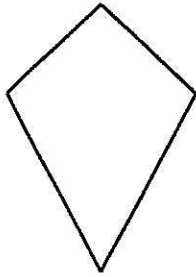
(a) Write down the mathematical name of this quadrilateral.

.... kite ....

(1)

(b) On the grid below, show how the shaded shape can tessellate.
You should draw at least six shapes.
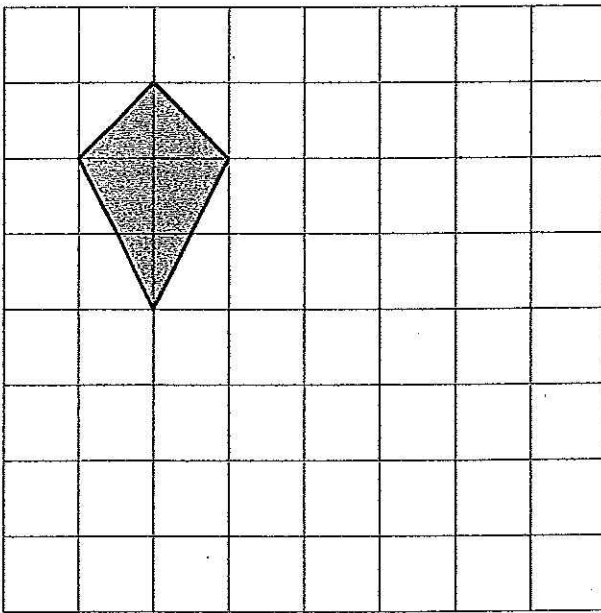
(2)

Q17

(Total 3 marks)

18. Lesley goes to the cinema.

The film starts at 18 10
The film lasts for 135 minutes.

(a) At what time does the film finish?

135 min = 2 hrs 15 mins

18 10 + 2hrs 15mins =

............20   25............

(3)

There are 300 people in the cinema.

$\frac{1}{6}$ of the 300 people are boys.

$\frac{3}{10}$ of the 300 people are girls.

The rest of the people are adults.

(b) Work out how many people are adults.

$\frac{1}{6}$ of 300 = $\frac{300}{6}$ = 50

$\frac{3}{10}$ of 300 = $\frac{1}{10}$ = 30 so $\frac{3}{10}$ = 90

50 + 90 = 140

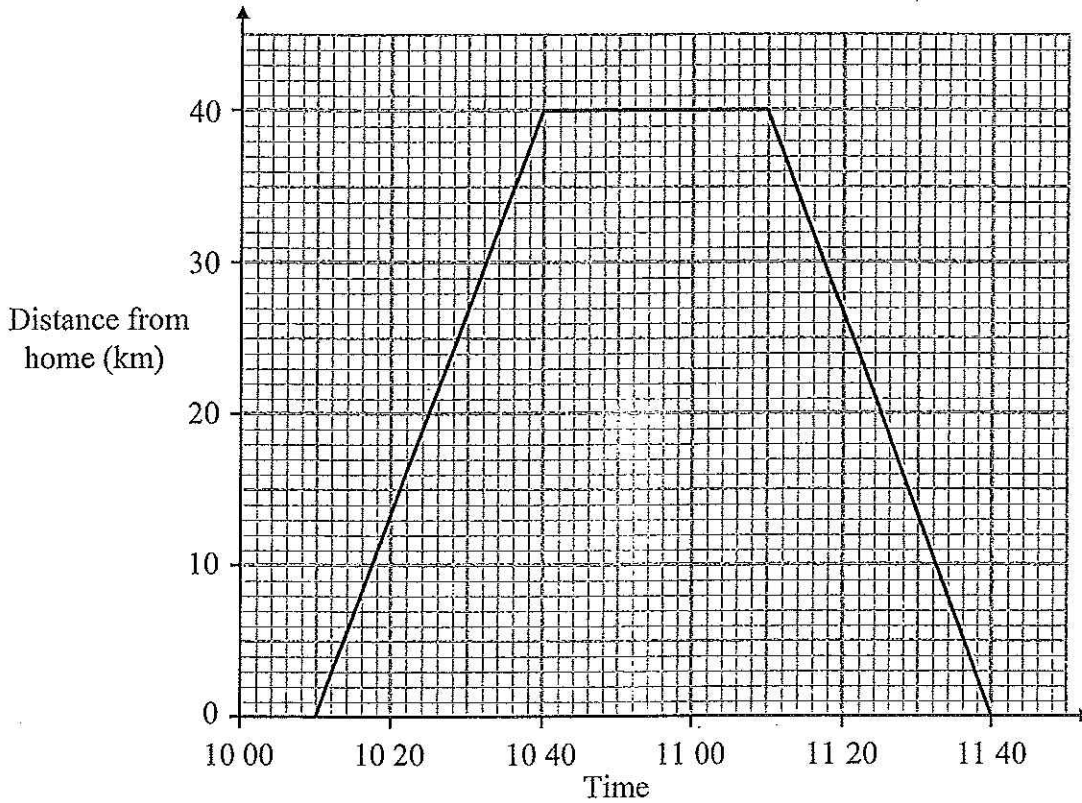300 - 140 = 160   ....160 adults

(4)   Q18

(Total 7 marks)

19. Nigel travelled from his home to his friend's house 40 km away.
Nigel stayed for some time at his friend's house before returning home.

Here is a distance-time graph for Nigel's journey.

(a) At what time did Nigel leave home?

........................1010........................
(1)

(b) How far was Nigel from home at 10 20?

........................13........................ km
(1)

(c) How many minutes did Nigel spend at his friend's house?

........................30........ minutes
(1)

Q19

(Total 3 marks)

20. (a) Work out $\dfrac{2}{3} \times \dfrac{1}{5}$

$$\frac{2 \times 1}{3 \times 5} = \frac{2}{15}$$

........2/15........

(1)

(b) Work out $\dfrac{1}{7} + \dfrac{2}{21}$

$$\frac{1}{7} = \frac{3}{21} + \frac{2}{21} = \frac{5}{21}$$

........5/21........

(2)

Q20

(Total 3 marks)

21. Here are the weights, in grams, of 16 eggs.

47	45	50	53	43	61	53	62
58	56	57	47	55	62	58	58

Draw an ordered stem and leaf diagram to show this information.
You must include a key.

```
4 | 7 5 3 7
5 | 0 3 5 8 6 7 5 8 8
6 | 1 2 2
```

```
4 | 3 5 7 7
5 | 0 3 3 5 6 7 8 8 8
6 | 1 2 2
```
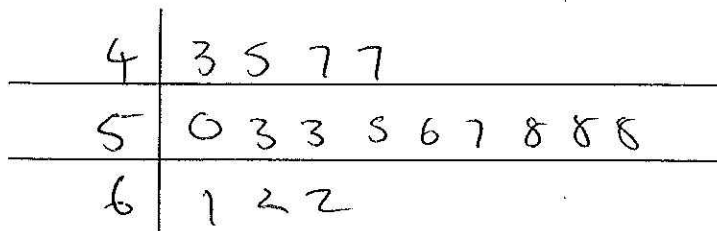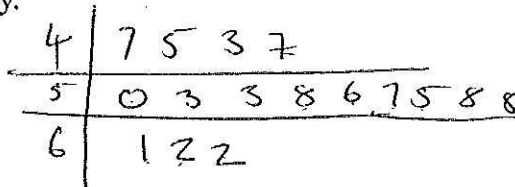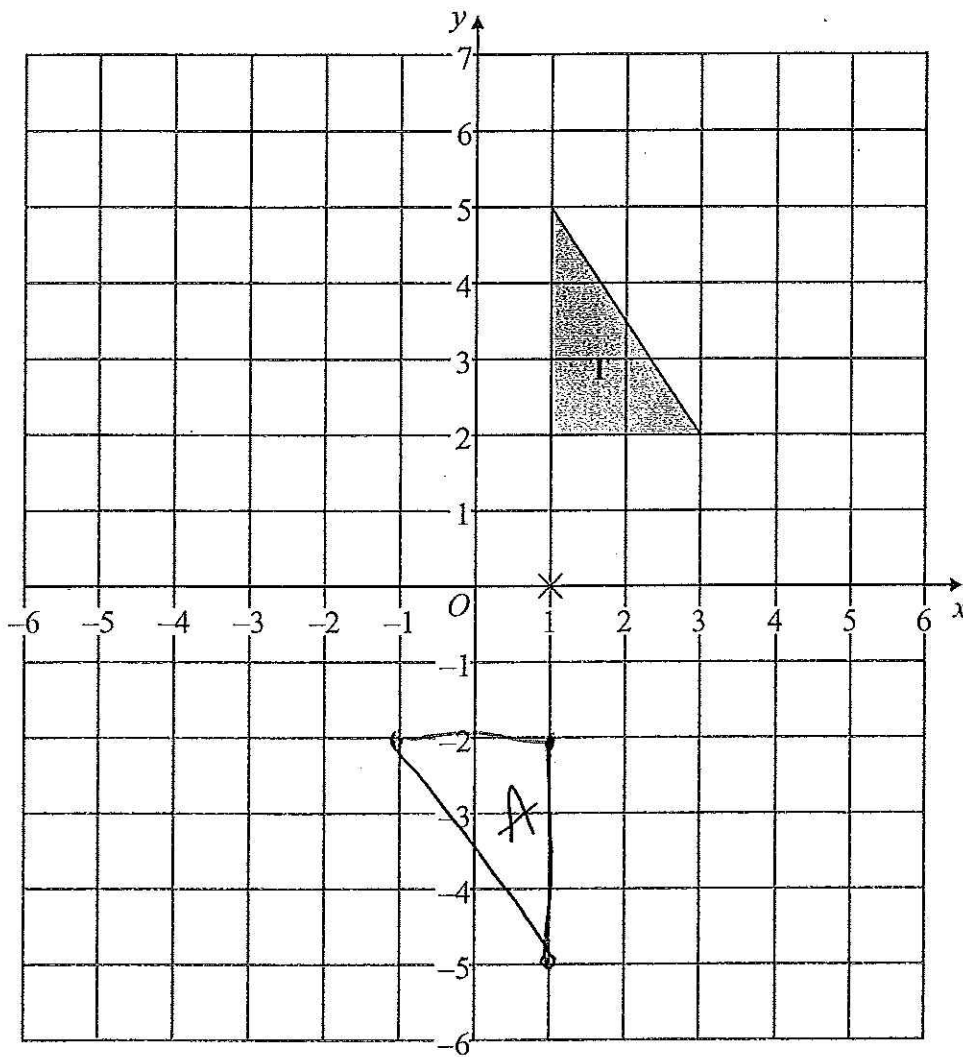
Key: 4 | 7 = 47

Q21

(Total 3 marks)

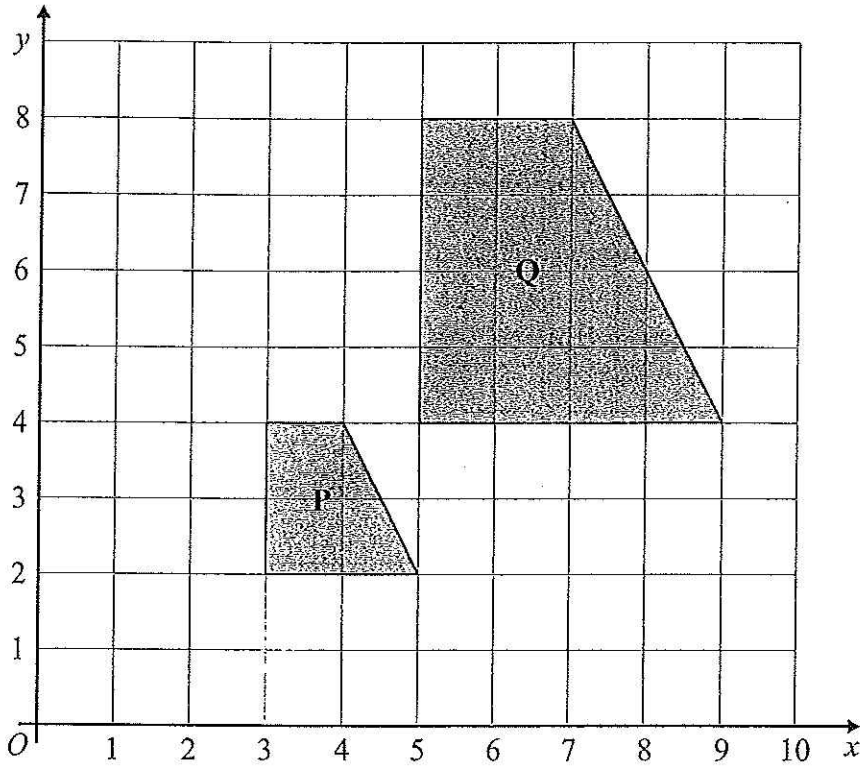**22.**

Triangle **T** has been drawn on the grid.

Rotate triangle **T** 180° about the point (1, 0).
Label the new triangle **A**.

(Total 2 marks)

23.

Describe fully the single transformation which maps shape **P** onto shape **Q**.

Enlargement , scale factor 2 ,
centre (1, 0)

(Total 3 marks)

24. Anil wants to find out how many DVDs people buy.

He uses this question on a questionnaire.

How many DVDs do you buy?

☐   ☐   ☐   ☐

1 – 5   5 – 10   10 – 15   15 – 20

Write down **two** different things wrong with this question.

1 ...no....time...frame..

....

2 ...boxes....overleep...

....

Q24

(Total 2 marks)

25. Anna and Bill share £40 in the ratio 2 : 3

Work out how much each person gets.

$$2 + 3 = 5$$

$$\frac{40}{5} = 8$$

$$2 \times 8 = 16$$

$$3 \times 8 = 24$$

Anna £.....16..............

Bill £.....24..............

Q25

(Total 3 marks)
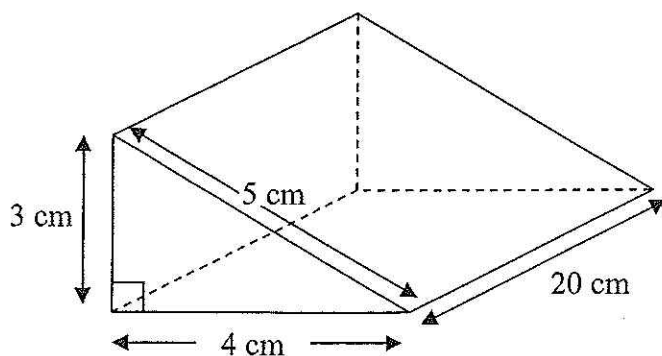
26.

3 cm

5 cm

4 cm

20 cm

Diagram **NOT**
accurately drawn

Work out the volume of the triangular prism.

$$\frac{4 \times 3}{2} = \frac{12}{2} = 6 \quad \times 20 \quad = 120$$

.........120......... cm³

Q26

(Total 2 marks)

27. Work out 4.52×36

	400	50	2
30	12000	1500	60
6	2400	300	12

12000
1500
2400
300
60
12
1
16272

16272

Q27

(Total 3 marks)

28. (a) Factorise $3x + 12$

$$3(x+4)$$

(1)

(b) Solve $4(2x - 3) = 5x + 7$

$$8x - 12 = 5x + 7$$

$$3x = 19$$

$$x = 19/3$$

$x =$ $19/3$

(3)

(c) Expand and simplify $(y + 4)(y + 5)$

$$y^2 + 5y + 4y + 20$$

$y^2 + 9y + 20$

(2)

Q28

(Total 6 marks)

TOTAL FOR PAPER: 100 MARKS

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