Paper Reference(s)

1380/1F

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 1 (Non-Calculator)

Foundation Tier

Thursday 5 November 2009 – Morning

Time: 1 hour 30 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
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 29 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.

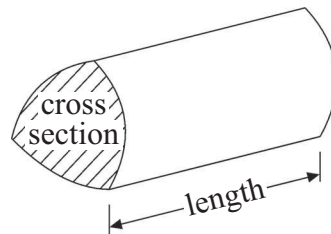*Turn over*

GCSE Mathematics (Linear) 1380

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 $= \frac{1}{2}(a+b)h$
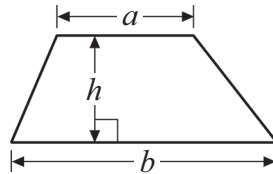
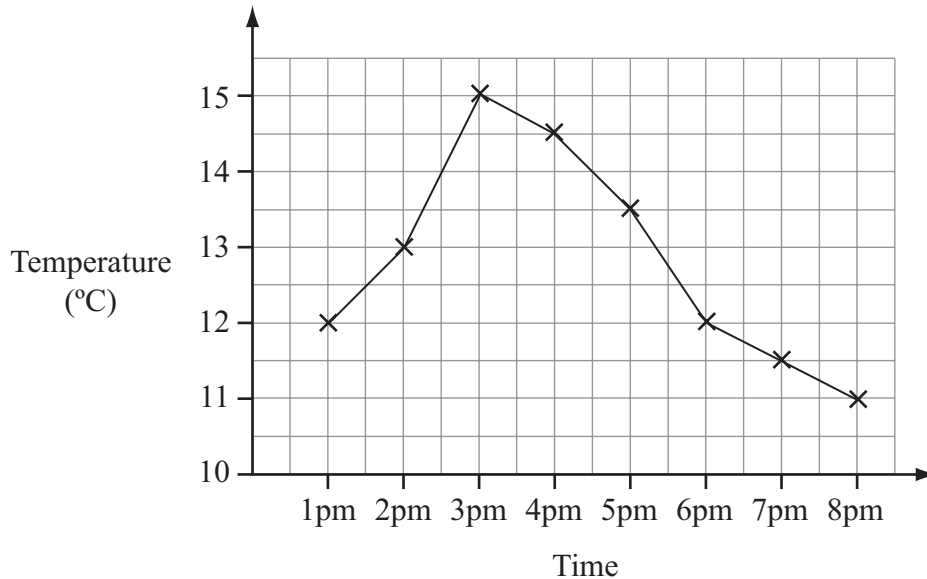**Volume of prism** = area of cross section × length

Answer ALL TWENTY NINE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1.

Harry recorded the temperature in his garden every hour on one particular day.
The diagram shows information about his results.

(a) What was the temperature at 2pm?

.... °C

(1)

(b) What was the highest recorded temperature?

.... °C

(1)

(c) At what time was a temperature of 11.5 °C recorded?

....

(1)

(d) Describe the change in temperature from 3pm to 8pm.

....

....

(1)   **Q1**

(Total 4 marks)

2. (a) Write the number 3104 in words.

....
(1)

(b) Write the number 2493 to the nearest hundred.

....
(1)

(c) Write down the value of the 4 in the number 34 200

....
(1)

Q2

(Total 3 marks)

3. 27 people were on a coach.

18 people got off the coach.
15 people got on the coach.

(a) How many people are there now on the coach?

....
(2)

There were 24 people at the next coach stop.

$\dfrac{1}{3}$ of these people got on the coach.

(b) What is $\dfrac{1}{3}$ of 24?

....
(2)

Q3
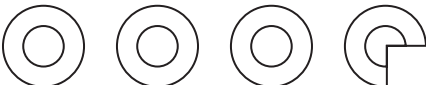
(Total 4 marks)

4. The pictogram shows the number of bicycles sold by a shop on Tuesday, Wednesday and Thursday.

Tuesday	◎ ◎ ◎
Wednesday	◎ ◎ ◖
Thursday	◎ ◎ ◎ ◕
Friday	
Saturday	

Key: ◎ represents 8 bicycles

(a) Write down the number of bicycles sold on Tuesday.

....
(1)

(b) Write down the number of bicycles sold on Wednesday.

....
(1)

16 bicycles were sold on Friday.
28 bicycles were sold on Saturday.

(c) Use this information to complete the pictogram.

(2) **Q4**

(Total 4 marks)

5.
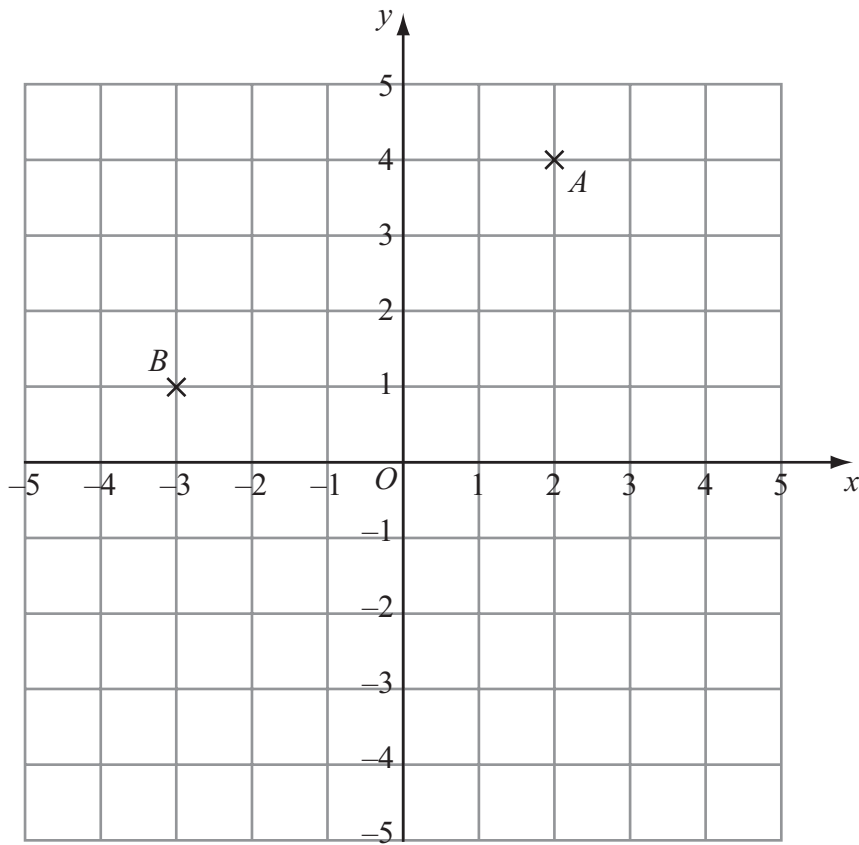
(a) Write down the coordinates of the point *A*.

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

(1)

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

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

(1)

(c) On the graph, mark the point $(0, -2)$ with a cross (✗).
Label this point *C*.

(1)

(Total 3 marks)

6. Here are some coins.

Alison puts these 9 coins in a row.
She picks 3 of the coins to make 8 pence.

(a) Write down the value of each of the three coins she picks.

.... p

.... p

.... p

(1)

Alison puts the 9 coins in a row again.

(b) (i) What is the smallest amount of money she could make with 5 of these coins?

.... p

(ii) What is the largest amount of money she could make with 5 of these coins?

.... p

(2)   **Q6**

(Total 3 marks)

7. (a) Write the following numbers in order of size.
Start with the smallest number.

45   63   33   57   23

....

(1)

(b) Write the following temperatures in order of size.
Start with the lowest temperature.

4 °C   –5 °C   1 °C   –3 °C   6 °C

....

(1)

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

0.32   0.315   0.3   0.39   0.379

....

(1)   **Q7**

(Total 3 marks)

8. (a) Measure the length of the line *AB*.
Give your answer in centimetres.

A |———————————————————————| *B*
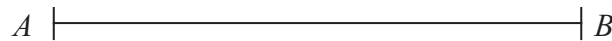
.... cm

(1)

(b) Mark with a cross (×) the point on the line *AB* that is 3 cm from *A*.

(1)   **Q8**

(Total 2 marks)

9. Here is a regular pentagon.
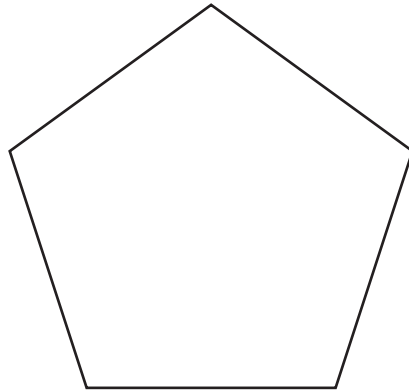
(a) What is the order of rotational symmetry of this pentagon?

....
(1)

(b) Draw a line of symmetry on this pentagon.

(1)
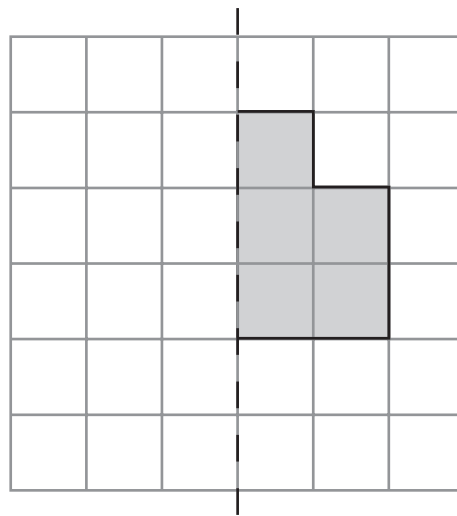
Mirror
line

(c) Reflect the shaded shape in the mirror line.

(1) | **Q9**

(Total 3 marks)

10. (a) Work out $3 \times 4 + 5$

....
(1)

(b) Work out $8 - 2 \times 4$

....
(1)

(c) Work out $42 \div (2 \times 3)$

....
(1)   **Q10**

(Total 3 marks)

11. (a) Change 2.5 centimetres to millimetres.

.... mm
(1)

(b) Change 2 kilograms to grams.

.... g
(1)   **Q11**

(Total 2 marks)

12. A school shop sells four flavours of crisps.

Sandra kept a record of the sales of crisps in one week.
The table gives some information about the sales.

Flavour	Percentage sales
Plain	25%
Salt & Vinegar	40%
Cheese & Onion	20%
Beef	

(a) Complete the table.

(1)

(b) Which flavour of crisp had the highest percentage sales?

....
(1)

(c) Write 25% as a fraction in its simplest form.

....
(2)

The school shop sold 200 packets of crisps that week.

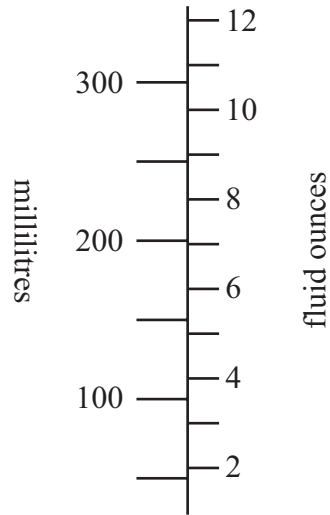(d) How many packets of Cheese & Onion crisps were sold during that week?

....
(2)

Q12

(Total 6 marks)

N 3 5 5 1 8 A 0 1 1 2 4

13. Here is part of a scale on a measuring jug.

millilitres   fluid ounces

12
300
10
8
200
6
100
4
2

(a) Use the scale to find an estimate for

(i) 200 millilitres in fluid ounces,

.... fluid ounces

(ii) 4 fluid ounces in millilitres.

.... millilitres

(2)

(b) What is the reading on each of these scales?

(i)

40
20   60
mph
0   80

(ii)

40
20   60
mph
0   80
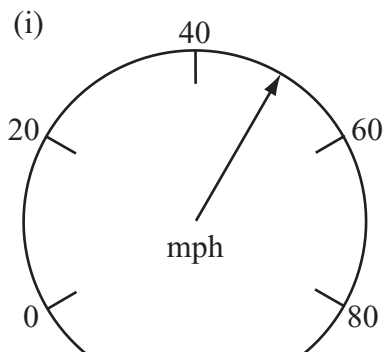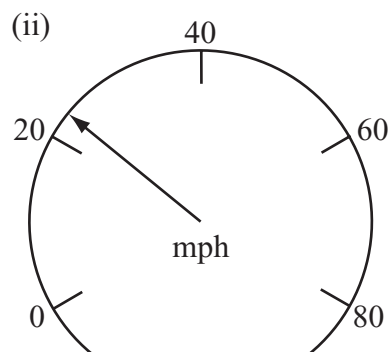
(i) .... mph

(ii) .... mph

(2)

(Total 4 marks)

14. Here is a sketch of a right-angled triangle.

Diagram **NOT** accurately drawn

4.5 cm

8 cm
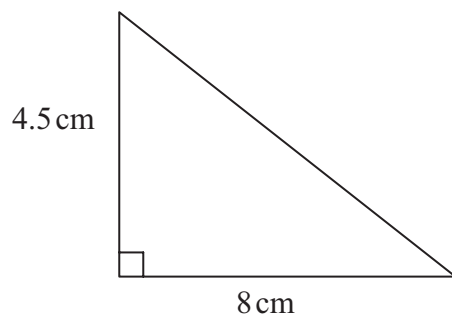
In the space below, make an accurate drawing of this triangle.

(Total 3 marks)

N 3 5 5 1 8 A 0 1 3 2 4

15. Emma has 7 chocolates in a box.
4 of the chocolates are white chocolate.
The other chocolates are dark chocolate.

Emma takes at random a chocolate from the box.

(a) What is the probability that Emma takes a white chocolate?

....
(1)

(b) What is the probability that Emma takes a dark chocolate?

....
(2)

(Total 3 marks)

Q15

16. Work out $\dfrac{3}{8} + \dfrac{1}{4}$

Give your answer in its simplest form.

....
(Total 2 marks)

Q16

17. Shams uses this rule to work out the total charge for photocopying.

Total charge = number of photocopies × copy rate

Shams needs 15 photocopies in colour.
The copy rate for photocopies in colour is 6 pence.

(a) Use the rule to work out the total charge.

.... p
(2)

Shams also needs 25 photocopies in black and white.
The total charge is 75 pence.

(b) Use the rule to work out the copy rate for photocopies in black and white.

.... p
(2)

(Total 4 marks)

18. Using the information that

$$74 \times 234 = 17\,316$$

write down the value of

(a) 740×234

....
(1)

(b) 74×2.34

....
(1)

(Total 2 marks)

N 3 5 5 1 8 A 0 1 5 2 4

19. (a) Complete the table of values for $y = 2x + 2$

x	-2	-1	0	1	2	3
y		0	2			

(2)

(b) On the grid, draw the graph of $y = 2x + 2$
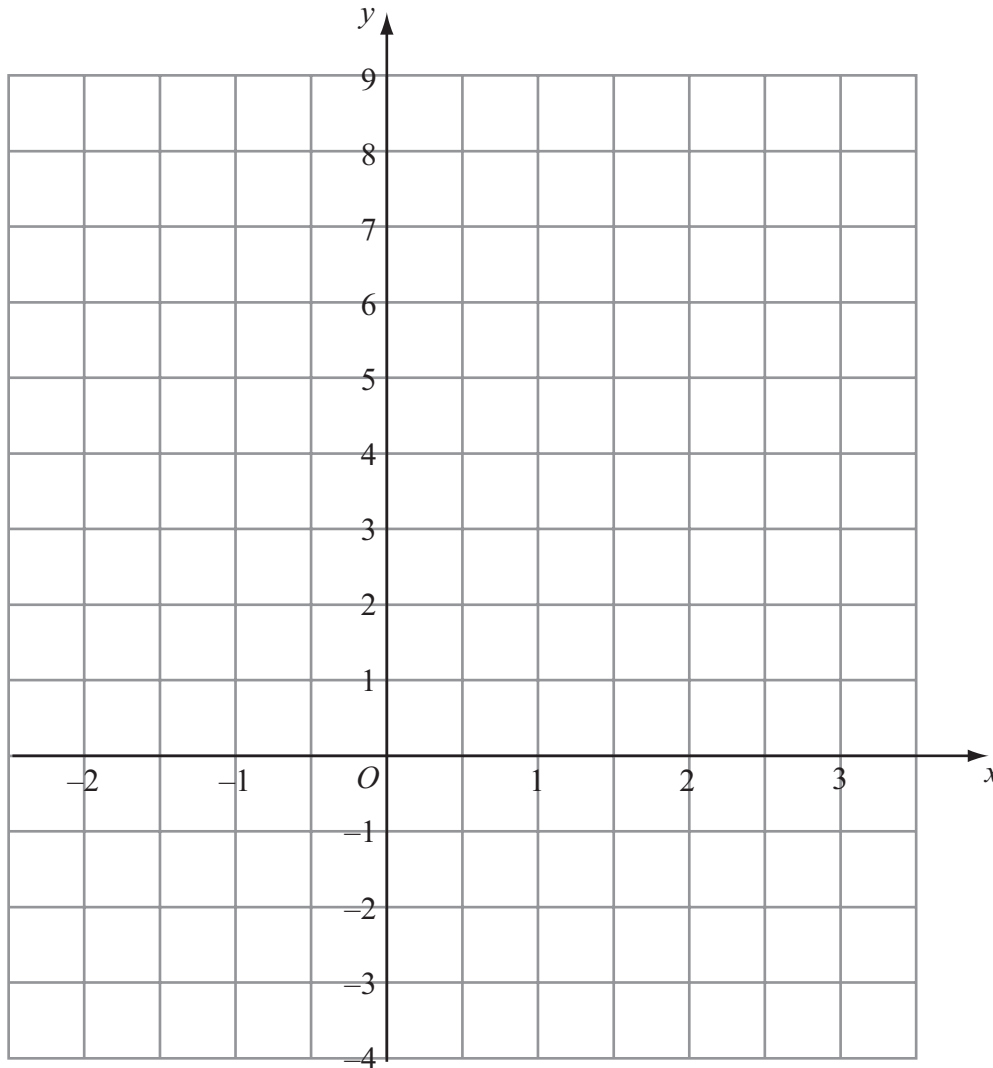
(2)

(c) Use your graph to find

(i) the value of y when $x = -1.5$

$y =$ ....

(ii) the value of x when $y = 7$

$x =$ ....

(2)

(Total 6 marks)

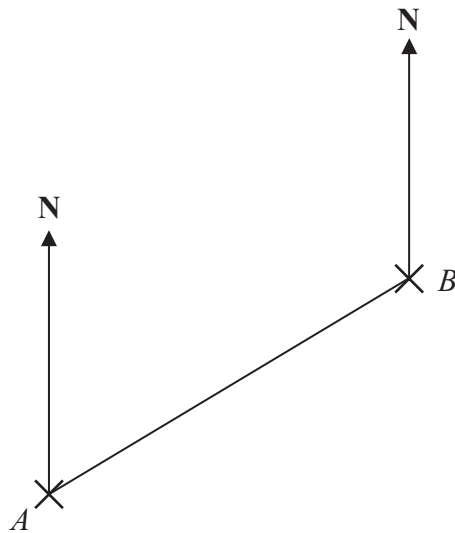**20.** The diagram shows the positions of two telephone masts, *A* and *B*, on a map.

N

N

X *B*

X
A

(a) Measure the bearing of *B* from *A*.

.... °

(1)

Another mast *C* is on a bearing of 160° from *B*.
On the map, *C* is 4 cm from *B*.

(b) Mark the position of *C* with a cross (✕) and label it *C*.

(2) **Q20**

(Total 3 marks)
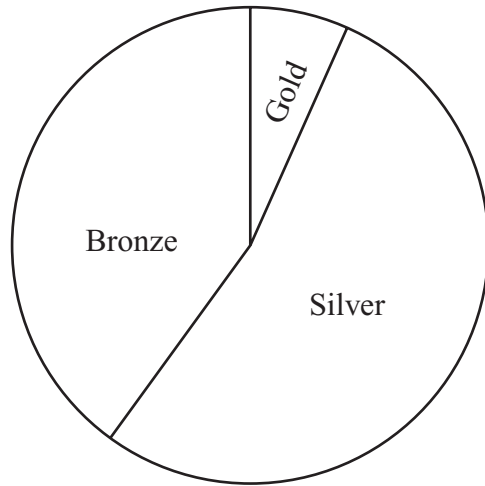
21.

2004 Athens   1996 Atlanta

The pie charts show information about the proportion of medals won by the United Kingdom in the Olympic Games in 2004, and in 1996.

(a) Sally says "In 2004 we won more Bronze medals than Gold medals".
Sally is **right**.
Explain why.

....

....

....

(1)

(b) Ben says "The number of silver medals won in 1996 is more than the number of silver medals won in 2004".
Ben could be **wrong**.
Explain why.

....

....

....
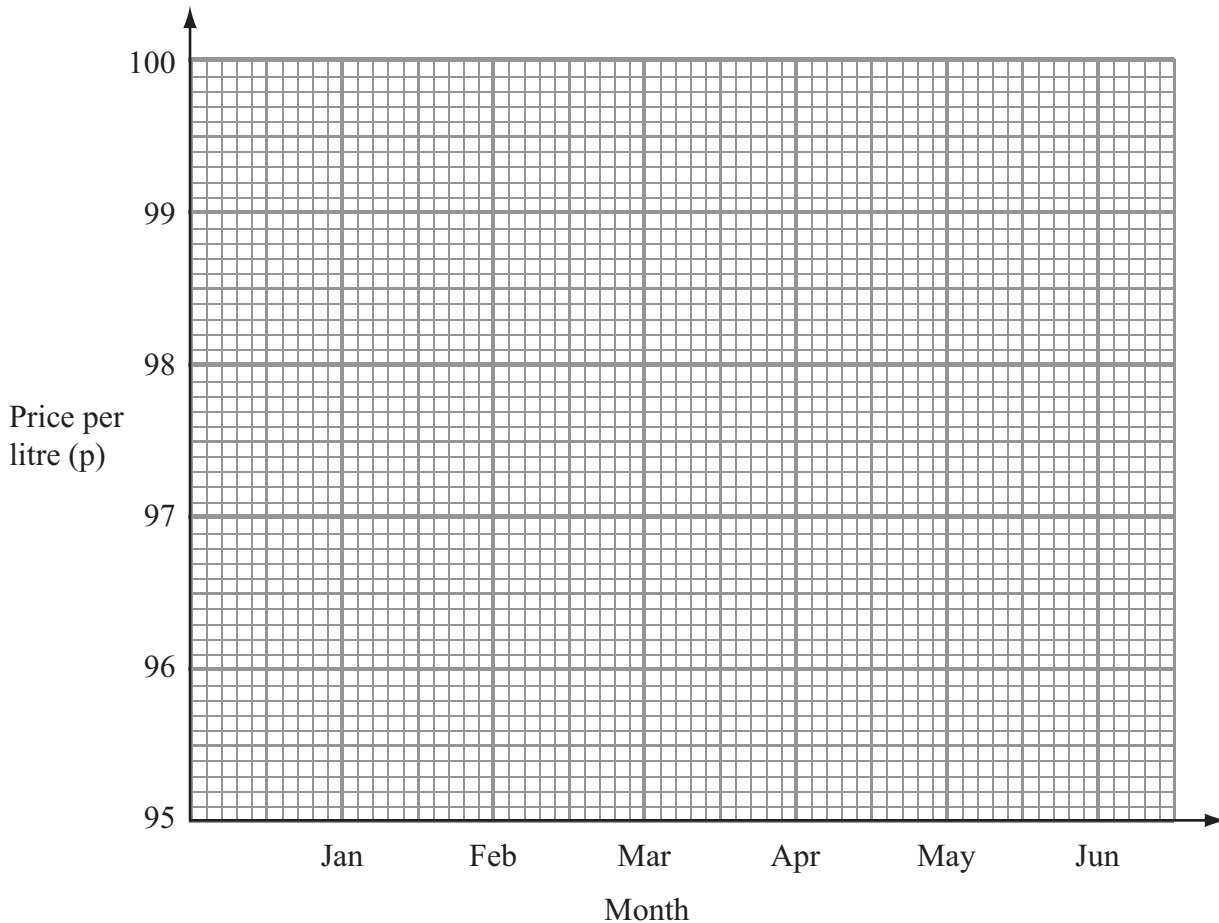
(1)   Q21

(Total 2 marks)

22. Hassan is collecting information about the price of petrol during a 6-month period.

His results are shown in the table.

Month	Jan	Feb	Mar	Apr	May	Jun
Price per litre (p)	96.1	96.2	97.3	97.7	98.3	99.1

Show this information as a line graph.

Price per litre (p)

Month

(Total 2 marks)

23. Work out   423 × 12

You **must** show **all** your working.

....

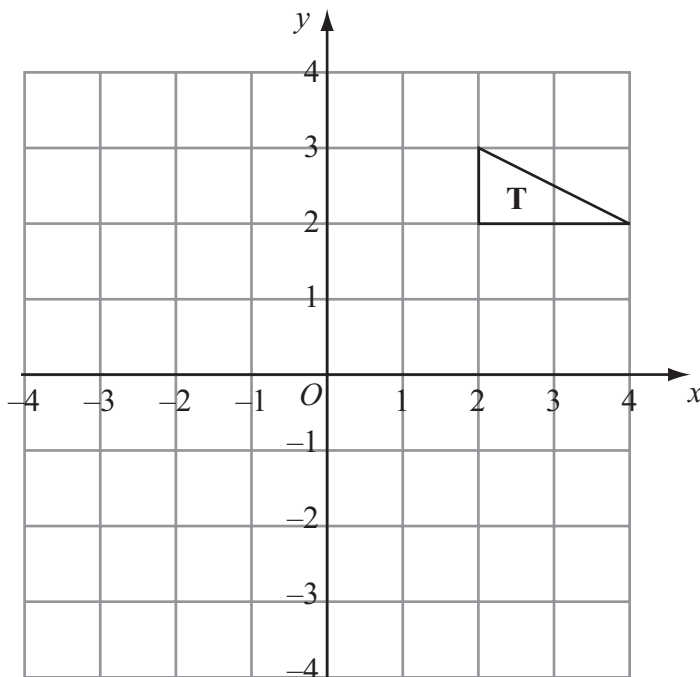**(Total 3 marks)**

24.

Triangle **P** has been drawn on a grid.

(a) On the grid, draw an enlargement of the triangle **P** with scale factor 3
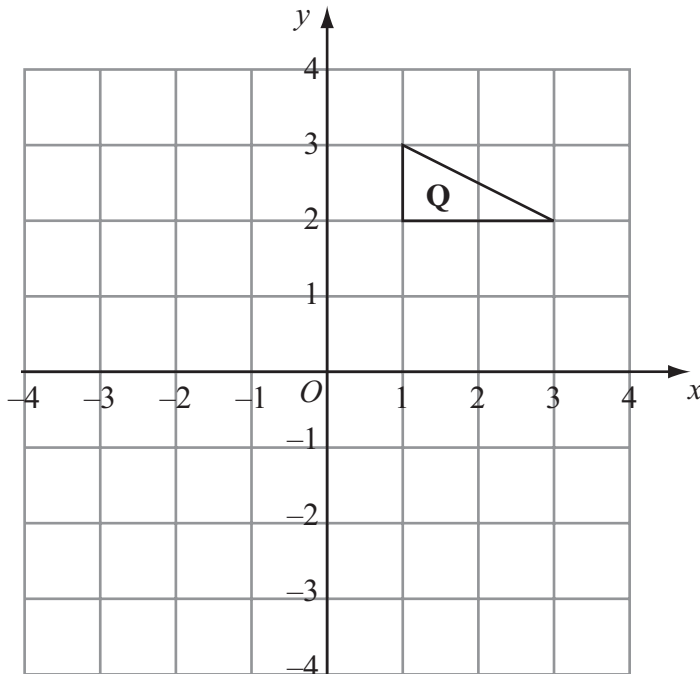
(2)

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

(b) On the grid, reflect triangle **T** in the *y*-axis.

(2)

Triangle **Q** has been drawn on a grid.

(c) On the grid, rotate triangle **Q** 90° clockwise, centre *O*.

(3)

(Total 7 marks)

25. Simon wants to find out how much people spend using their mobile phone.

He uses this question on a questionnaire.

How much do you spend using your mobile phone?

☐ ☐ ☐

£1–£5 £5–£10 £10–£15

(a) Write down **two** things that are wrong with this question.

1 ....

....

2 ....

....

(2)

(b) Design a better question for his questionnaire to find out how much people spend using their mobile phone.
You should include some response boxes.

(2)   **Q25**

(Total 4 marks)
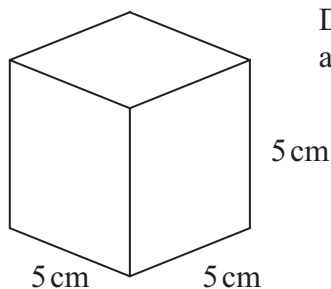
26. A solid cube has sides of length 5 cm.

Diagram **NOT**
accurately drawn

5 cm

5 cm   5 cm

Work out the total surface area of the cube.
State the units of your answer.

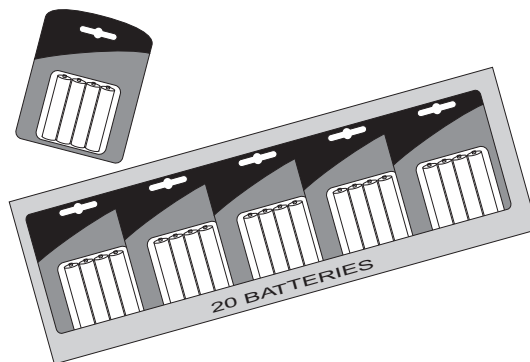...

(Total 4 marks)

27. Batteries are sold in packets and boxes.

Each packet contains 4 batteries.
Each box contains 20 batteries.

Bill buys p packets of batteries
and b boxes of batteries.
Bill buys a total of N batteries.

Write down a formula for N in
terms of p and b.

20 BATTERIES

....

(Total 3 marks)

28. Work out an estimate for the value of $\dfrac{31 \times 4.92}{0.21}$

....

(Total 3 marks)

29. (a) Expand $y(2y - 3)$

....

(1)

(b) Factorise $x^2 - 4x$

....

(2)

k is an integer such that $-1 \leqslant k < 3$

(c) List all the possible values of k.

....

(2)

(Total 5 marks)

TOTAL FOR PAPER: 100 MARKS

END