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|---------------|--|--|--|--|--|-----------------|---|---|---|---|-----------------------|------------|---------------------------|
| Centre No. | | | | | | Paper Reference | | | | | Surname Correccion | Initial(s) | |
| Candidate No. | | | | | | 1 | 3 | 8 | 0 | / | 1 | F | Signature Mr M Semar - |

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

Examiner's use only

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| | | |
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Team Leader's use only

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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.

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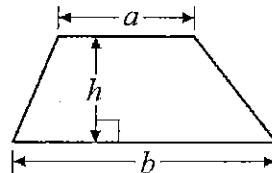
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GCSE Mathematics (Linear) 1380

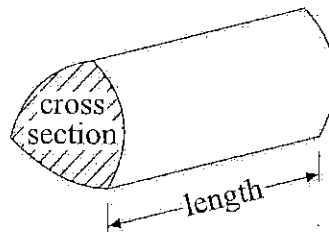
Formulae: Foundation Tier

**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 \times length



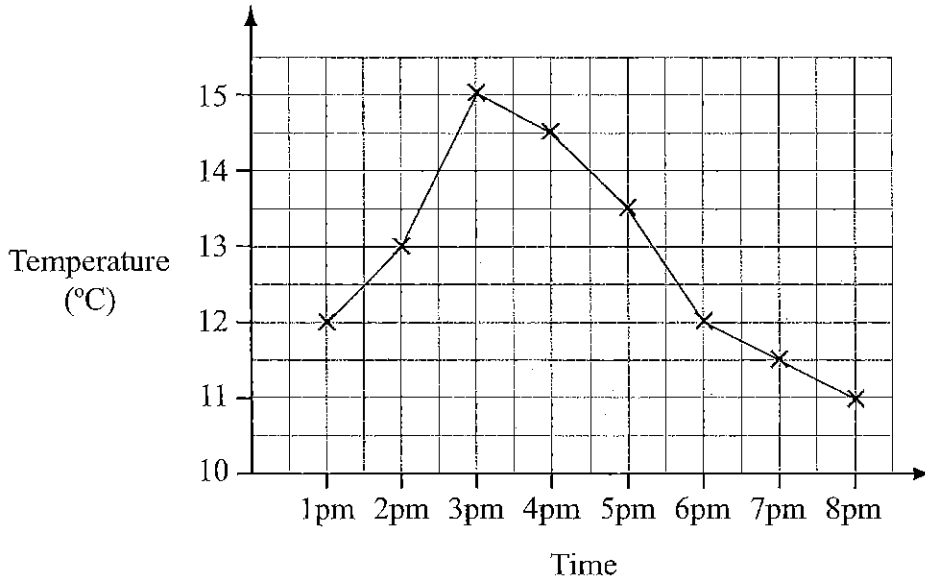
Answer ALL TWENTY NINE questions.

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?

13 °C
(1)

(b) What was the highest recorded temperature?

15 °C
(1)

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

7pm
(1)

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

Fall from 15°C to 11°C
.....
.....
(1)

(Total 4 marks)

Q1



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

Three thousands hundred and four -

(1)

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

24|93

2500

(1)

(c) Write down the value of the 4 in the number 34200

4000

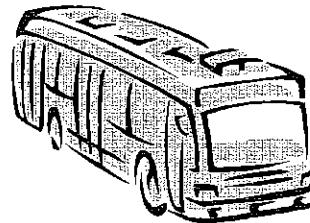
(1)

Q2

(Total 3 marks)

3. 27 people were on a coach.

18 people got off the coach. $\rightarrow 27 - 18 = 9$
 15 people got on the coach. $\rightarrow 9 + 15 = 24$



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

$$\begin{array}{r} 27 \\ - 18 \\ \hline 9 \end{array} \quad \begin{array}{l} \uparrow \\ \text{got off} \end{array}$$

$$\begin{array}{r} 9 \\ + 15 \\ \hline 24 \end{array} \quad \begin{array}{l} \uparrow \\ \text{got on} \end{array}$$

24

(2)

There were 24 people at the next coach stop.

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

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

$$\frac{1}{3} \times 24 = \frac{24 \times 1}{3} = 24 \div 3 = 8$$

8

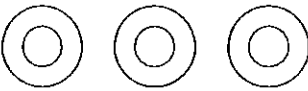

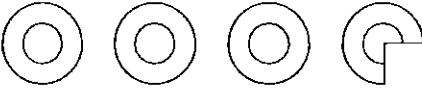


(2)


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.

$$8 + 8 + 8 = 24$$

24

(1)

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

$$8 + 8 + 4 = 20$$

20

(1)

16 bicycles were sold on Friday.

28 bicycles were sold on Saturday.

(c) Use this information to complete the pictogram.

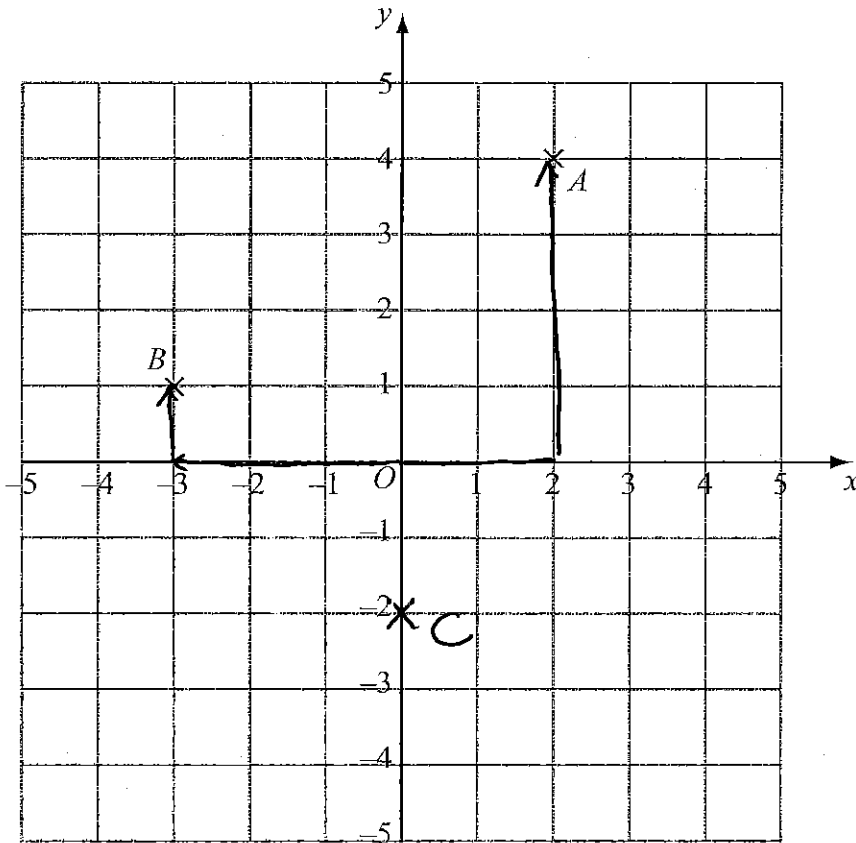
(2)

(Total 4 marks)

Q4



5.



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

(2 , 4)
(1)

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

(-3 , 1)
(1)

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

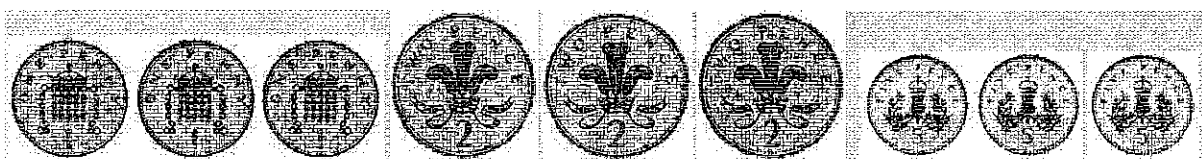
(1)

Q5

(Total 3 marks)



6. Here are some coins.



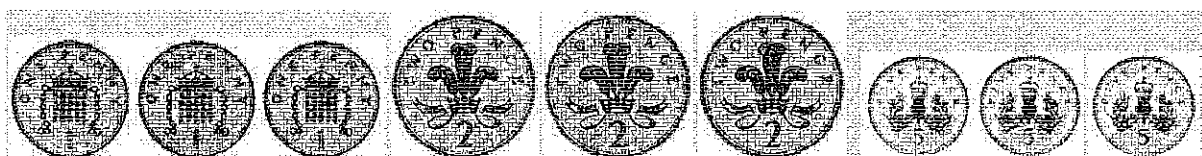
Alison puts these 9 coins in a row.
She picks 3 of the coins to make 8 pence.

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

$$(1p) + (2p) + (5p)$$

$$\begin{array}{r} 1 \dots p \\ 2 \dots p \\ 5 \dots p \\ \hline (1) \end{array}$$

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?

$$(1p) + (1p) + (1p) + (2p) + (2p)$$

7

..... p

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

$$(5p) + (5p) + (5p) + (2p) + (2p)$$

19

..... p
(2)

(Total 3 marks)

Q6



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

45 63 33 57 23

23 33 45 57 63

(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

-5°C -3°C 1°C 4°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

0.3 / 0.315 / 0.32 / 0.379 / 0.39

(1)

(Total 3 marks)

Q7

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



7 cm
(1)

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

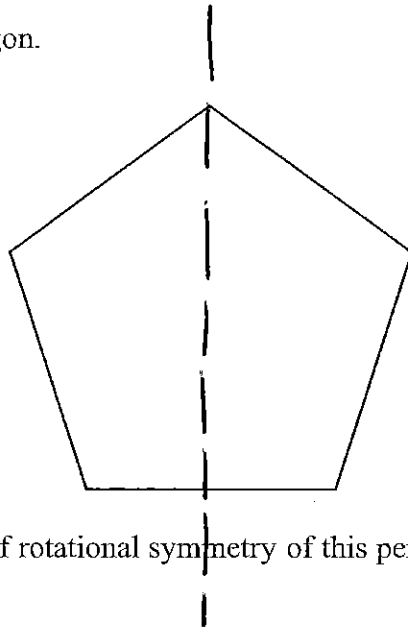
(1)

(Total 2 marks)

Q8



9. Here is a regular pentagon.



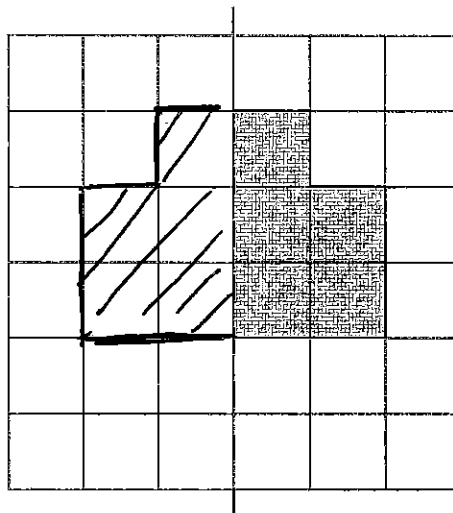
(a) What is the order of rotational symmetry of this pentagon?

5

(1)

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

(1)



Mirror line

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

(1)

(Total 3 marks)

Q9



BODMAS -

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

$$3 \times 4 = 12$$

$$12 + 5 = 17$$

$$\begin{array}{r} 17 \\ \hline \end{array} \quad (1)$$

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

$$2 \times 4 = 8$$

$$8 - 8 = 0$$

$$\begin{array}{r} 0 \\ \hline \end{array} \quad (1)$$

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

$$(2 \times 3) = 6$$

$$42 \div 6 = 7$$

$$\begin{array}{r} 7 \\ \hline \end{array} \quad (1)$$

(Total 3 marks)

Q10

11. (a) Change 2.5 centimetres to millimetres.

$$1 \text{ cm} = 10 \text{ mm}$$

$$\begin{aligned} 2.5 \text{ cm} &= 2.5 \times 10 \\ &= 25 \text{ mm} \end{aligned}$$

$$\begin{array}{r} 25 \\ \hline \end{array} \text{ mm} \quad (1)$$

(b) Change 2 kilograms to grams.

$$1 \text{ kg} = 1000 \text{ gr}$$

$$2 \text{ kg} = 2000 \text{ gr}$$

$$\begin{array}{r} 2000 \\ \hline \end{array} \text{ g} \quad (1)$$

(Total 2 marks)

Q11



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 | 15% |

$$100\% - (25\% + 40\% + 20\%) = 15\%$$

(a) Complete the table.

(1)

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

Salt & Vinegar -

(1)

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

$$\frac{25}{100} = \frac{25}{25 \times 4} = \frac{1}{4}$$

$$\frac{1}{4}$$

(2)

The school shop sold 200 packets of crisps that week.

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

Cheese & Onion 20%

So 20% of 200

$$\frac{20}{100} \times 200 = 20 \times 2 = 40$$

40

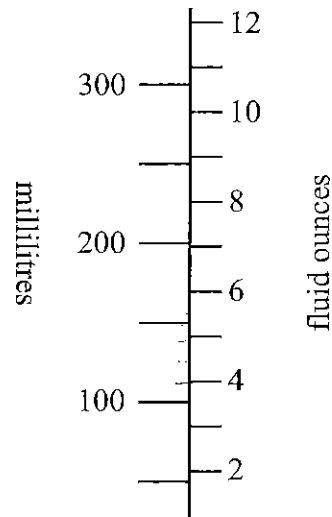
(2)

(Total 6 marks)

Q12



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



(a) Use the scale to find an estimate for

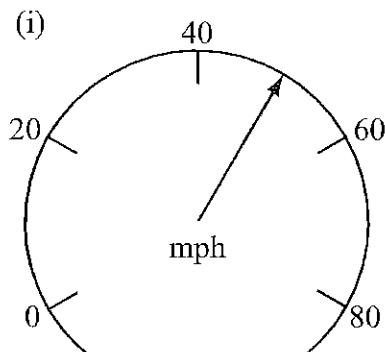
(i) 200 millilitres in fluid ounces,

7 - 7.2 fluid ounces

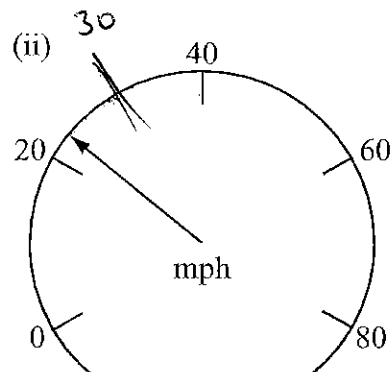
(ii) 4 fluid ounces in millilitres.

110 - 112 millilitres
(2)

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



(i) 50 mph



(ii) 22 - 23 mph
(2)

(Total 4 marks)

Q13



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

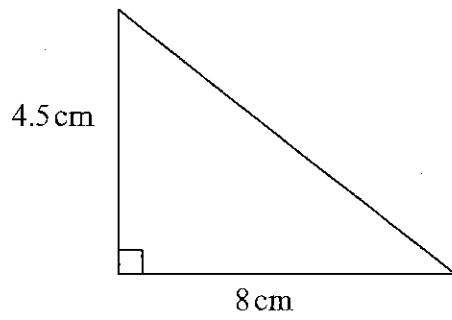
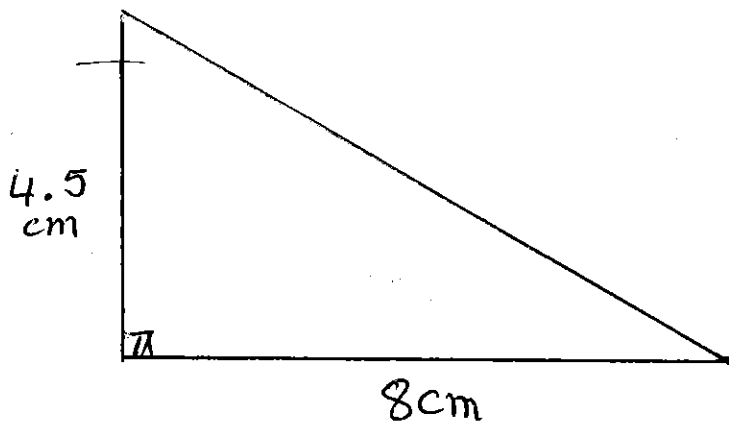


Diagram **NOT** accurately drawn

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



Q14

(Total 3 marks)



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

white = 4
Dark = 3 = 7 - 4

Emma takes at random a chocolate from the box.

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

$$P(\text{white}) = \frac{4}{7}$$

$$\frac{4}{7}$$

(1)

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

$$P(\text{Dark}) = \frac{3}{7}$$

$$\frac{3}{7}$$

(2)

(Total 3 marks)

Q15

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

Give your answer in its simplest form.

$$\frac{1}{4} = \frac{2}{8}$$

$$\frac{3}{8} + \frac{1}{4} = \frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

OR

$$\frac{3}{8} + \frac{1}{4} = \frac{3 \times 4}{32} + \frac{1 \times 8}{32} = \frac{12}{32} + \frac{8}{32} = \frac{20}{32} = \frac{5}{8}$$

$$\frac{5}{8}$$

(Total 2 marks)

Q16



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

$$\text{Total charge} = \text{number of photocopies} \times \text{copy rate}$$

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.

$$\text{Total charge} = 15 \times 6 = 90 \text{ pence}$$

$$\begin{array}{r} 90 \\ \hline \end{array} \text{ p} \\ (2)$$

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.

$$75 \text{ pence} = 25 \times \text{copy rate}$$

$$\text{copy rate} = 75 \div 25 = 3 \text{ pence}$$

$$\begin{array}{r} 3 \\ \hline \end{array} \text{ p} \\ (2)$$

(Total 4 marks)

Q17

18. Using the information that

$$74 \times 234 = 17316$$

write down the value of

(a) $740 \times 234 = 74 \times 10 \times 234 = 173160$

$$\begin{array}{r} 173160 \\ \hline \end{array} \\ (1)$$

(b) $74 \times 2.34 = 74 \times \frac{234}{100} = \frac{17316}{100}$

$$\begin{array}{r} 173.16 \\ \hline \end{array} \\ (1)$$

(Total 2 marks)

Q18



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

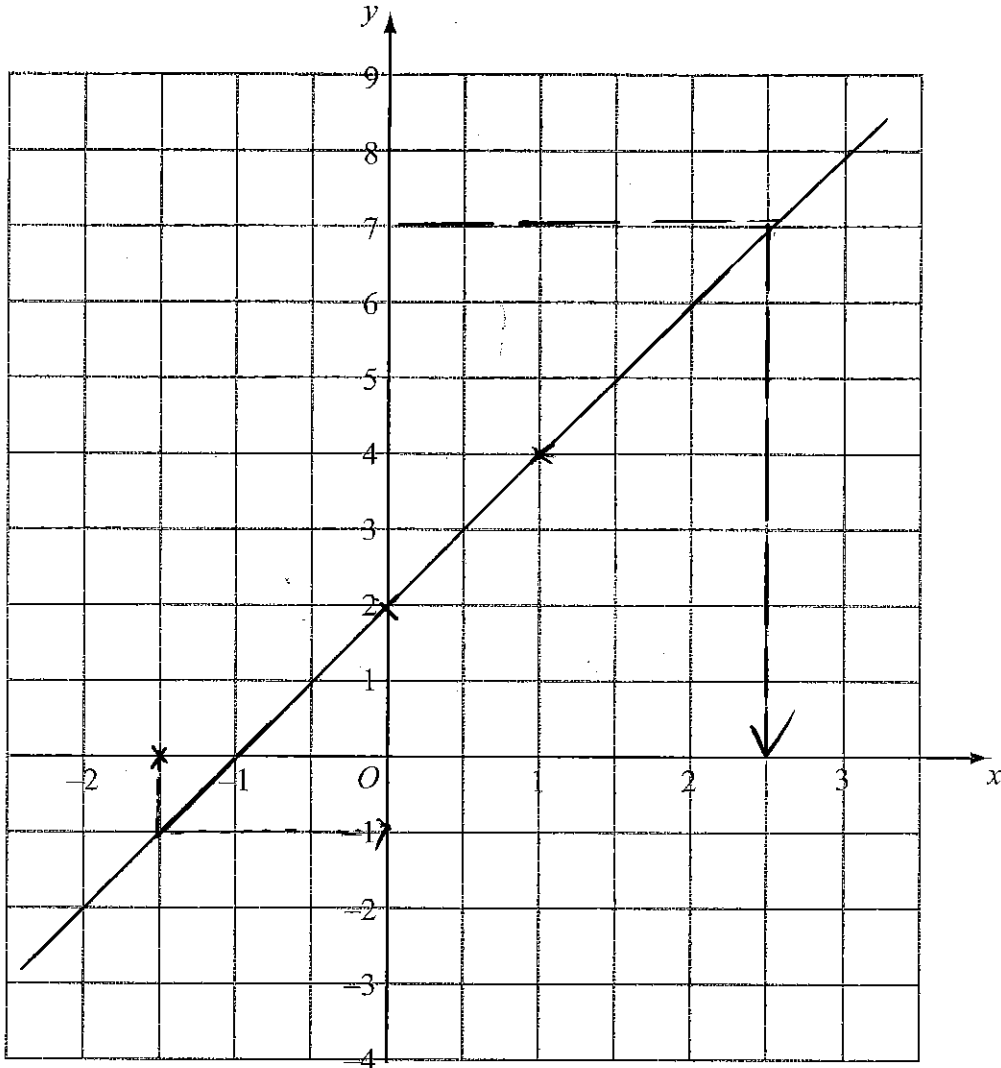
$x = 1$ $y = 2 \times 1 + 2 = 4$

| | | | | | | |
|---|----|----|---|---|---|---|
| x | -2 | -1 | 0 | 1 | 2 | 3 |
| y | -2 | 0 | 2 | 4 | 6 | 8 |

(2)

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

$+2$
pattern = +2



(2)

(c) Use your graph to find

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

$y = \dots -1 \dots$

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

$x = \dots 2.5 \dots$

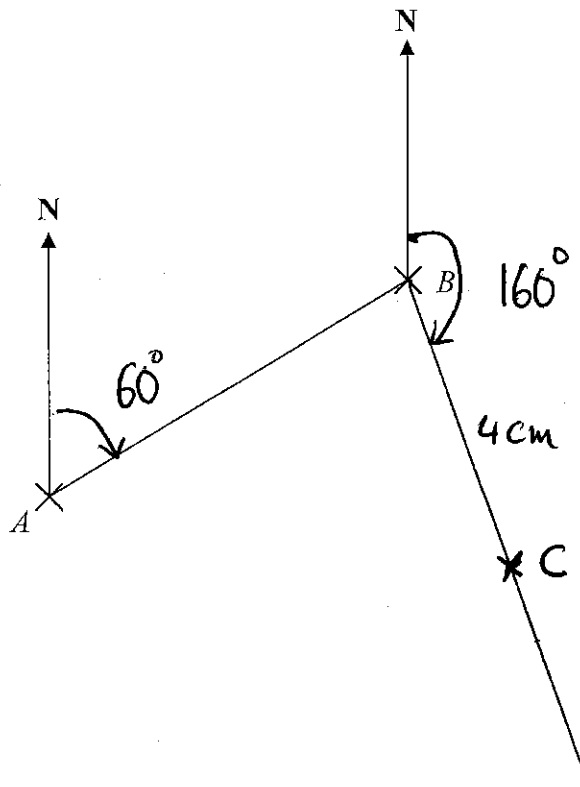
(2)

(Total 6 marks)

Q19



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



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

60
.....
(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 (x) and label it *C*.

(2)

(Total 3 marks)

Q20

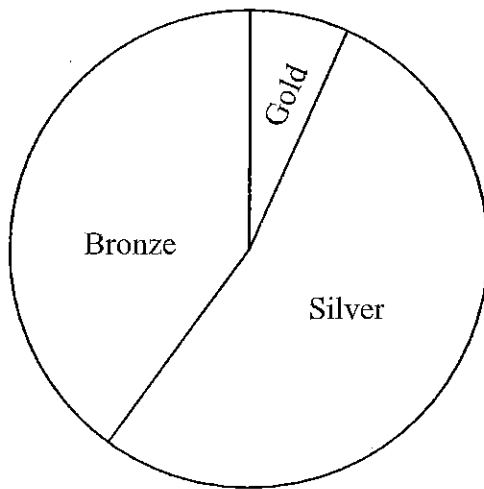


21.

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.

The sector for Bronze medals is larger than the sector for Gold medals.

(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.

We don't know the actual numbers of medals won in 1996 and 2004.

(1)

(Total 2 marks)

Q21

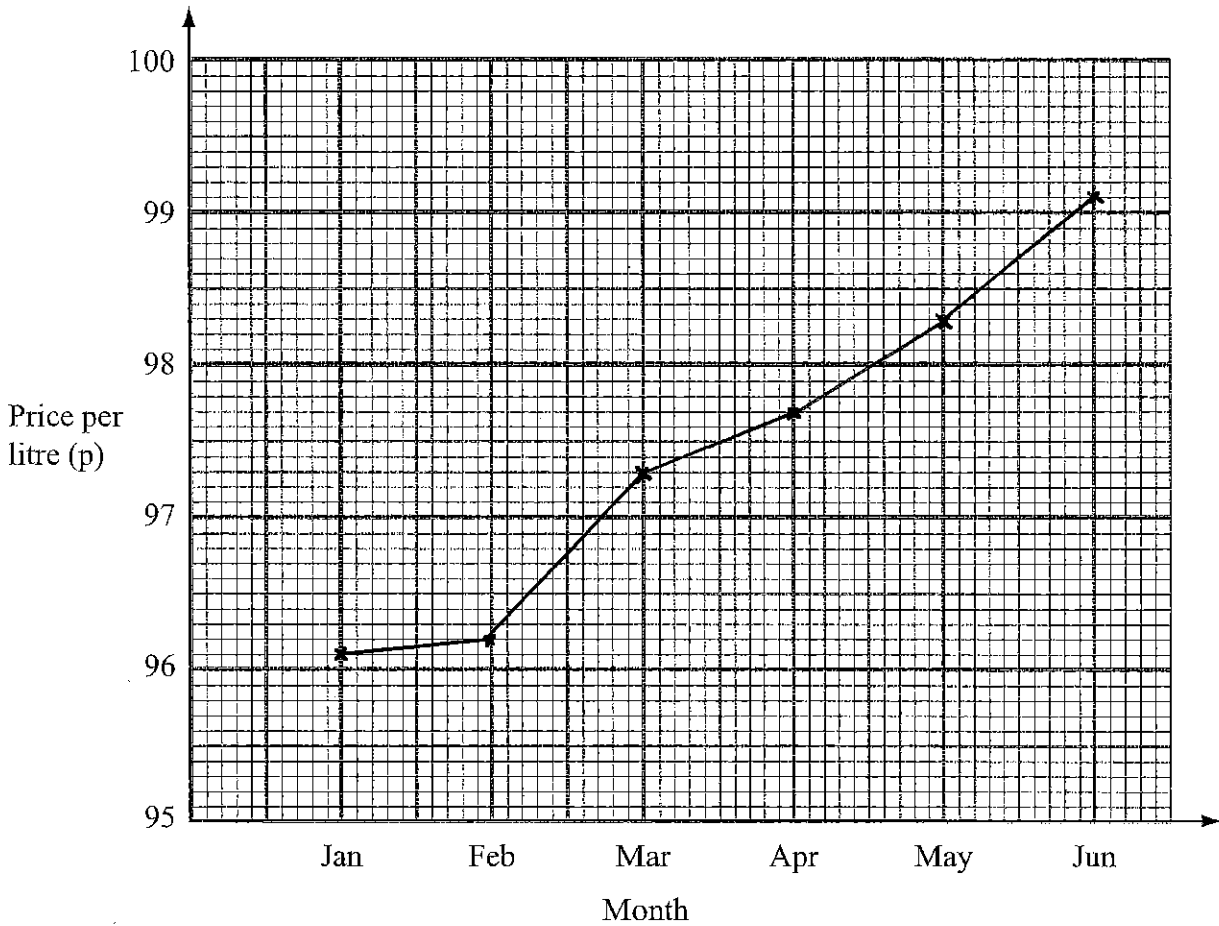


22. Hassan is collecting information about the price of petrol during a 6-month period.

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.



(Total 2 marks)

Q22



23. Work out 423×12

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

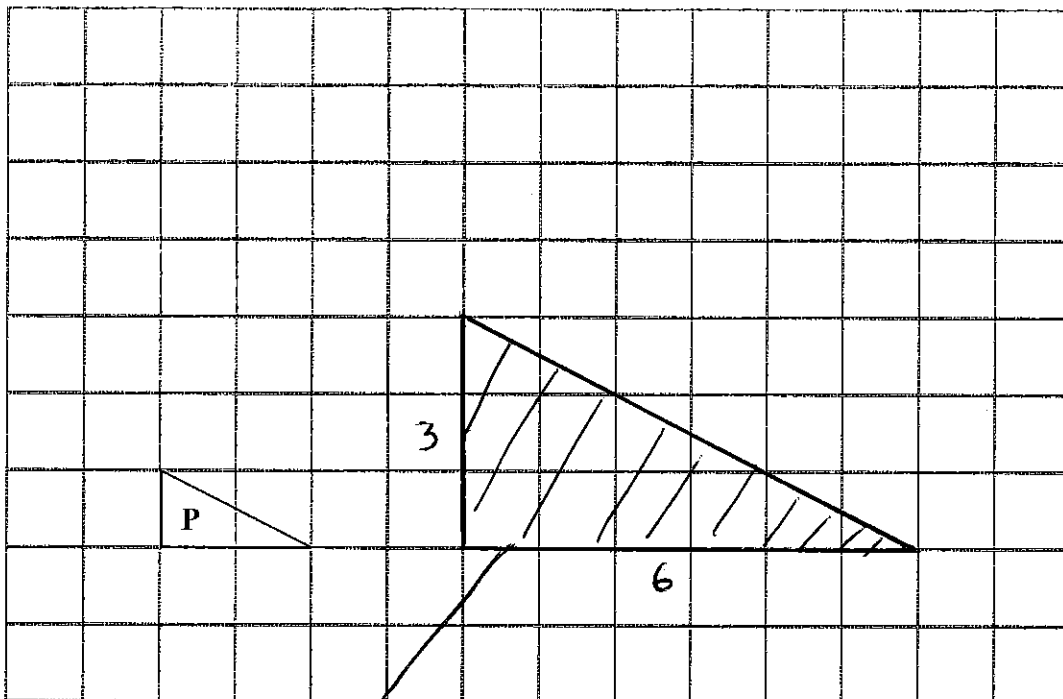
$$\begin{array}{r}
 423 \\
 \times 12 \\
 \hline
 = 846 \\
 + 423 \\
 \hline
 5076
 \end{array}$$

5076

Q23

(Total 3 marks)

24.

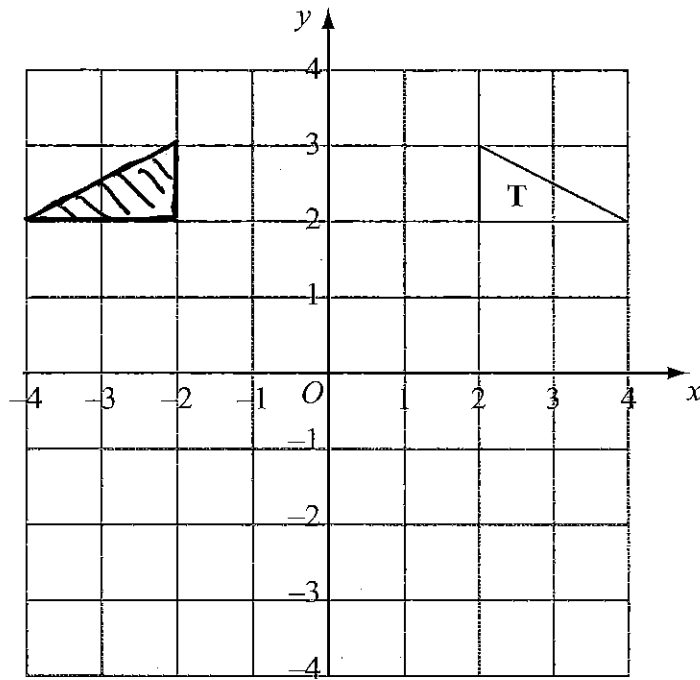


Triangle **P** has been drawn on a grid.

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

(2)

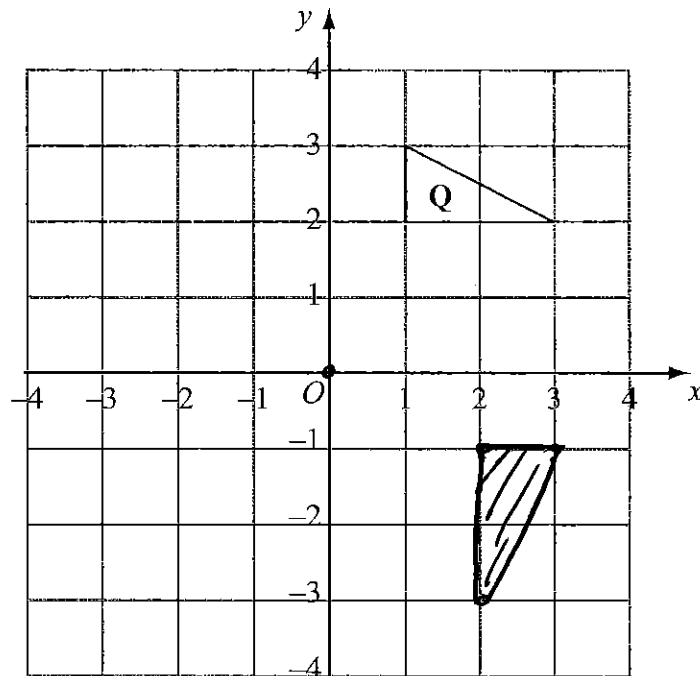




Triangle T has been drawn on a grid.

(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)

Q24

(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?

| | | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| £1-£5 | £5-£10 | £10-£15 |

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

1 Overlapping 1-5 & 5-10

2 No time frame (week/month?)

(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.

How much per month do you spend using your mobile phone?

| | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| £0 | £1-5 | £6-10 | >£10+ |

(2)

(Total 4 marks)

Q25



sf (significant figure)

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

$31 = 30$ (1sf)

$4.92 = 5$ (1sf)

$0.21 = 0.2$

$0.21 = 0.2$

$30 \div 2 = 15$
 $30 \div 0.2 = 150$



$\frac{30 \times 5}{0.2} = 150 \times 5 = 750$

750

(Total 3 marks)

Q28

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

$y \times 2y - y \times 3 = 2y^2 - 3y$

$2y^2 - 3y$

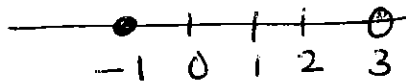
(b) Factorise $x^2 - 4x$

$x^2 = x \times x$ $x \times x - 4 \times x$
 $4x = 4 \times x$ $x(x - 4)$

$x(x - 4)$

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

(c) List all the possible values of k .



$-1, 0, 1, 2$

(Total 5 marks)

Q29

TOTAL FOR PAPER: 100 MARKS

END

