Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	5	4	0	F	/	1	F	Signature	

Paper Reference(s)

5540F/1F

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics A (Linear) – 2540

Paper 1 (Non-Calculator)

Foundation Tier

Monday 19 May 2008 – 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 28 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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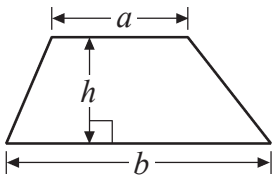
GCSE Mathematics (Linear) 2540

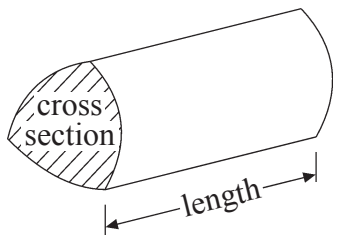
Formulae: Foundation Tier

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



Leave blank

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. (a) Write the number 3187 to the nearest thousand.

.....

(1)

(b) Write the number **four thousand six hundred and eighty one** in figures.

.....

(1)

(c) Write the number 5060 in words.

.....

(1) **Q1**

(Total 3 marks)

2.

A ——————————————— B

(a) Measure the length of the line AB.
Give the units with your answer.

.....

(2)

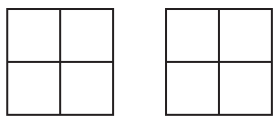
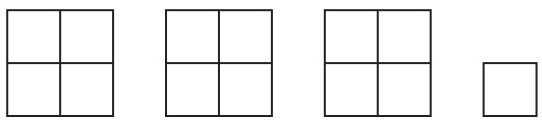
(b) On the diagram, mark with a cross (×) the midpoint of the line AB.

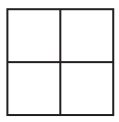
(1) **Q2**

(Total 3 marks)

Leave blank

3. Sharif buys some fruit.
The pictogram shows information about the number of apples and the number of oranges he buys.

Apples	
Oranges	
Peaches	

Key:  represents 8 fruit

(a) Write down the number of apples he buys.

.....

(1)

(b) Write down the number of oranges he buys.

.....

(1)

Sharif buys 12 peaches.

(c) Use this information to complete the pictogram.

(1)

Q3

(Total 3 marks)

Leave blank

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

17 6 168 24

.....

(1)

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

1.8 3.71 0.5 12.4

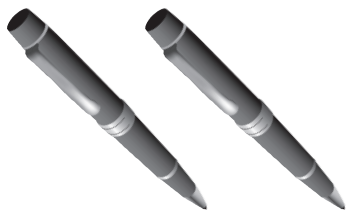
.....

(1) **Q4**

(Total 2 marks)

5. The total cost of these 2 pens is 60p.

Work out the total cost of 5 of these pens.
Give your answer in pounds.



£ .....

Q5

(Total 3 marks)

Leave blank

6. The table shows the distances in kilometres between 5 cities.

Hull	Leeds	Manchester	Sheffield	
100				
162	73			
110	60	65		
63	40	118	95	York

(a) Write down the distance between Hull and Manchester.

..... km
(1)

(b) From the table, write down the name of the city which is

(i) nearest to Hull,

.....

(ii) 60 km from Sheffield.

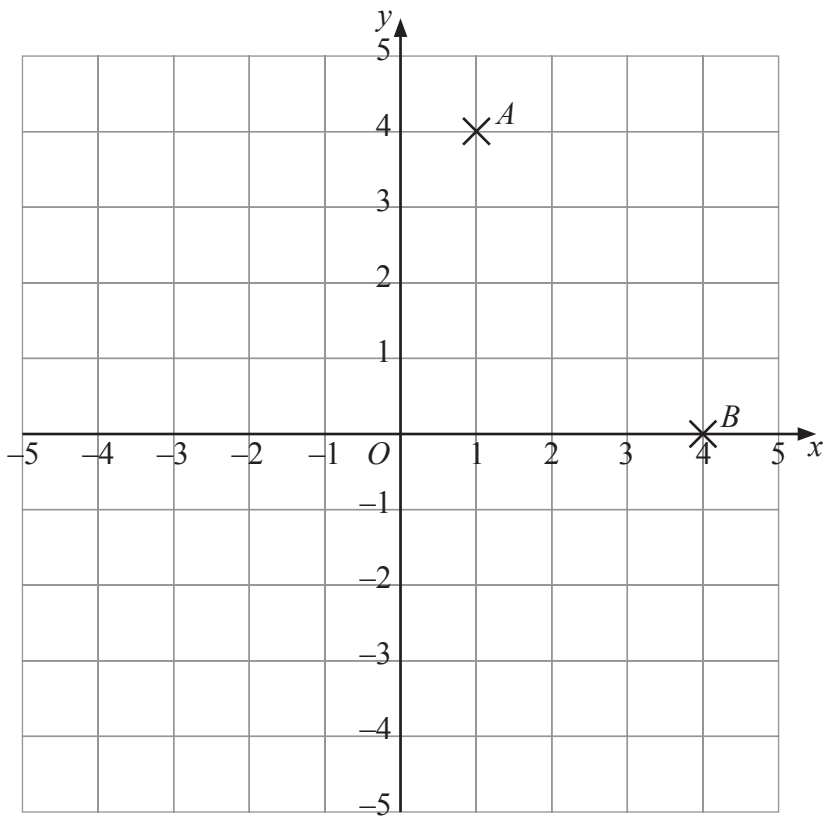
.....
(2)

(Total 3 marks)

Q6

Leave blank

7.



(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 (3, 2).
Label this point P.

(ii) On the grid, plot the point (– 4, 3).
Label this point Q.

(2)

Q7

(Total 4 marks)

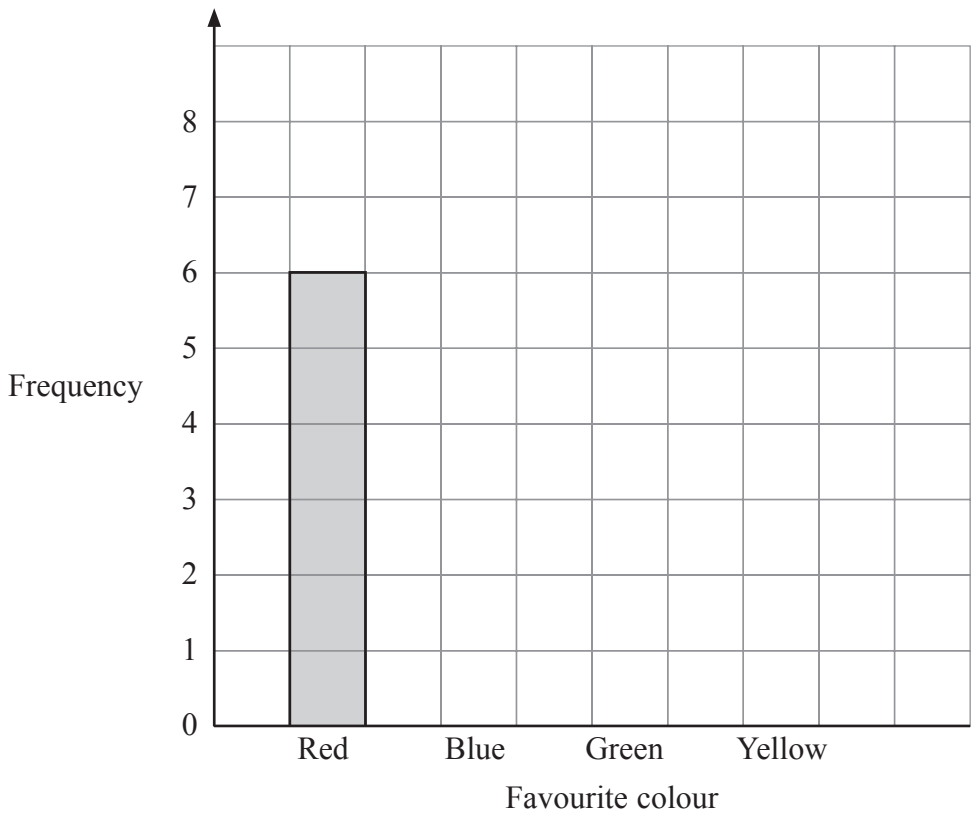
Leave blank

8. Steve asked his friends to tell him their favourite colour.

Here are his results.

Favourite colour	Tally	Frequency
Red	𝍸 |	6
Blue	𝍸 |||	8
Green	𝍸	5
Yellow	|||	3

(a) Complete the bar chart to show his results.



(2)

(b) Which colour did most of his friends say?

.....

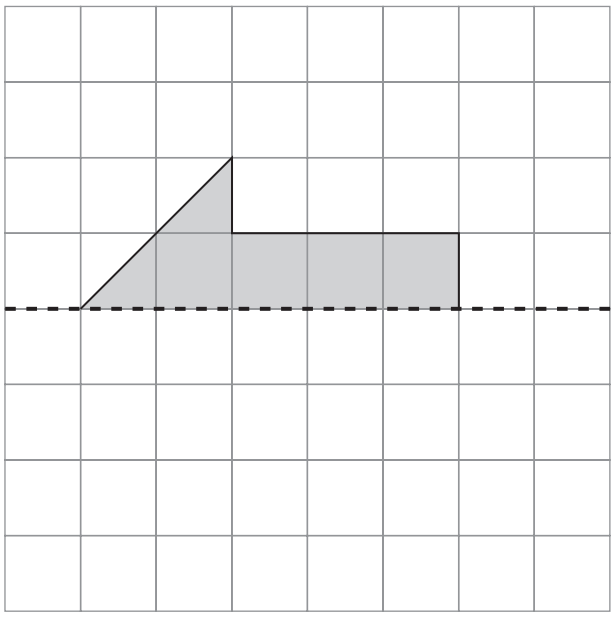
(1)

(Total 3 marks)

Q8

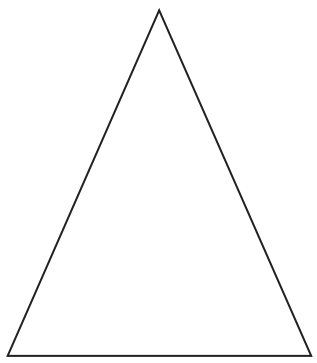
Leave blank

9.



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

(1)



(b) Draw the line of symmetry on this triangle.

(1) **Q9**

(Total 2 marks)

Leave blank

10. Work out

(i) $3 \times 3 - 5$

.....

(ii) $20 \div (12 - 2)$

.....

(iii) $7 + 8 \div 4$

.....

(Total 3 marks)

Q10

11. (a) Here are some fractions.

$\frac{2}{4}$ $\frac{4}{8}$ $\frac{2}{5}$ $\frac{7}{14}$

Which one of these fractions is **not** equal to $\frac{1}{2}$?

.....

Give a reason for your answer.

.....

.....

(2)

(b) Work out $\frac{3}{4}$ of 20

.....

(2)

Q11

(Total 4 marks)

Leave blank

12. $P = 3n$
$n = 6$

(a) Work out the value of P.

$P =$ .....
(1)

$Q = 2c + d$
$c = 3$
$d = 2$

(b) Work out the value of Q.

$Q =$ .....
(2)

Q12

(Total 3 marks)

13. (a) Complete the table by writing a sensible **metric** unit for each measurement.
The first one has been done for you.

The length of the river Nile	6700 kilometres
The height of the world's tallest tree	110 .....
The weight of a chicken's egg	70 .....
The amount of petrol in a full petrol tank of a car	40 .....

(3)

(b) Change 4 metres to centimetres.

..... cm
(1)

(c) Change 1500 grams to kilograms.

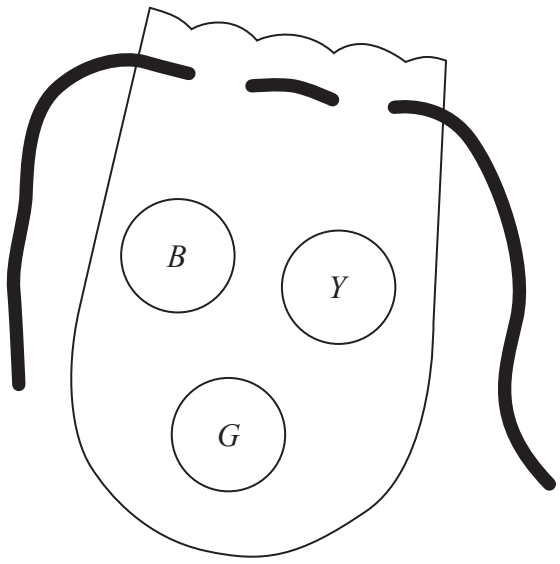
..... kg
(1)

Q13

(Total 5 marks)

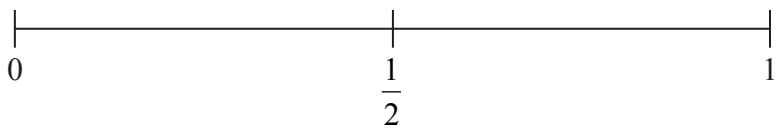
Leave blank

14. There are three beads in a bag.
One bead is blue, one bead is yellow and one bead is green.



Zoe takes a bead at random from the bag.

(a) On the probability scale, mark with the letter *B* the probability that she takes a blue bead.



(1)

Zoe now throws a coin.
One possible outcome for the bead and the coin is (green, heads).

(b) List all the possible outcomes for the bead and the coin.
One has already been done for you.

(green, heads) .....

.....

.....

(2)

(Total 3 marks)

Q14

Leave blank

15. (a)

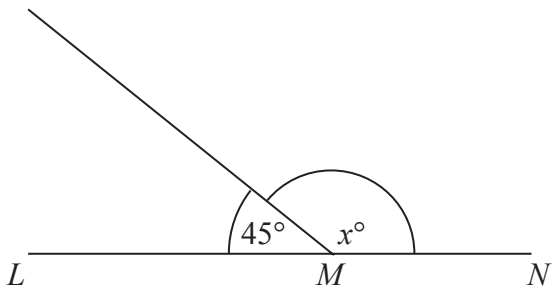


Diagram **NOT** accurately drawn

LMN is a straight line.

(i) Work out the value of x.

$x =$ .....

(ii) Give a reason for your answer.

.....

.....

(2)

(b)

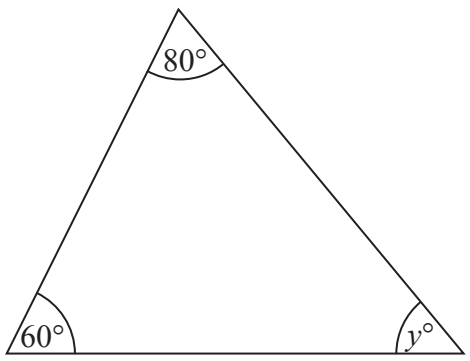


Diagram **NOT** accurately drawn

Work out the value of y.

$y =$ .....

(2)

Q15

(Total 4 marks)

Turn over

Leave blank

16. (a) Write 92% as a decimal.

.....
(1)

(b) Write 3% as a fraction.

.....
(1)

(c) Work out 5% of 400 grams.

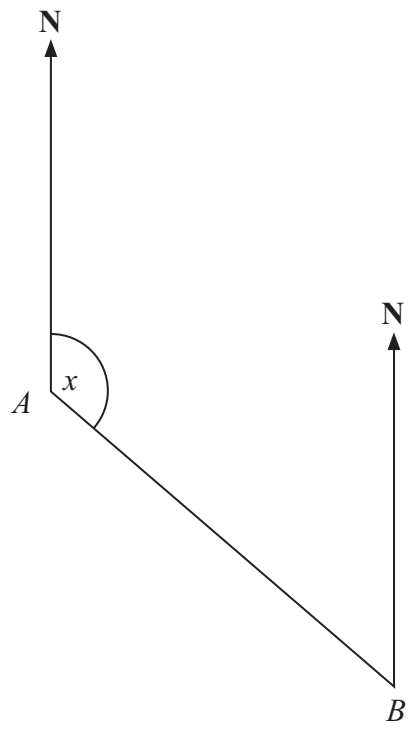
..... grams
(2)

Q16

(Total 4 marks)

Leave blank

17. The diagram shows the position of two airports, *A* and *B*.
A plane flies from airport *A* to airport *B*.



Scale: 1 cm represents 50 km

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

..... °

(1)

(b) Work out the real distance between airport *A* and airport *B*.
Use the scale 1 cm represents 50 km.

..... km

(2)

Airport *C* is 350 km on a bearing of 060° from airport *B*.

(c) On the diagram, mark airport *C* with a cross (×).
Label it *C*.

(2) **Q17**

(Total 5 marks)

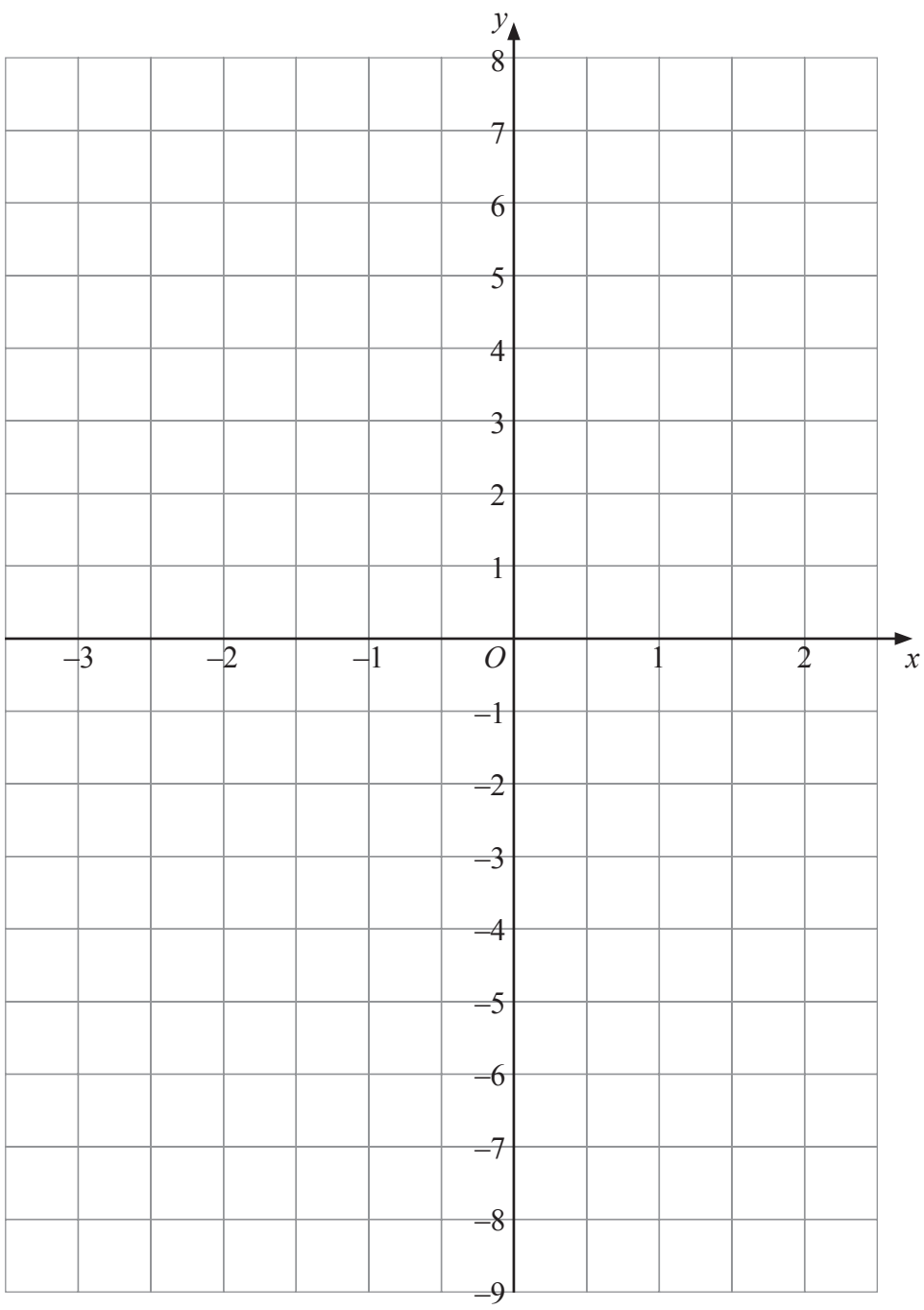
Leave blank

18. (a) Complete the table of values for $y = 3x + 1$

x	–3	–2	–1	0	1	2
y	–8		–2			

(2)

(b) On the grid, draw the graph of $y = 3x + 1$



(2) **Q18**

(Total 4 marks)

Leave blank

19. Kaysha has a part-time job.
She is paid £5.40 for each hour she works.
Last week Kaysha worked for 24 hours.

Work out Kaysha's total pay for last week.

£ .....

(Total 3 marks)

Q19

20. (a) Work out $\frac{1}{3} + \frac{1}{12}$

.....

(2)

(b) Work out $\frac{3}{4} \times \frac{1}{5}$

.....

(1)

(Total 3 marks)

Q20

Leave blank

21. (a) Simplify $d + d + d + d + d$

.....

(1)

(b) Simplify $y^2 + y^2$

.....

(1)

(c) Expand $4(3a - 7)$

.....

(2)

(d) Simplify $t \times t^2$

.....

(1)

(e) Simplify $m^5 \div m^3$

.....

(1) **Q21**

(Total 6 marks)

Leave blank

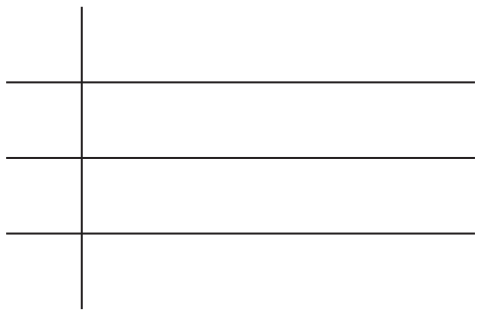
22. Here are the ages, in years, of 15 teachers.

35 52 42 27 36

23 31 41 50 34

44 28 45 45 53

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



Key:

(3)

One of these teachers is picked at random.

(b) Work out the probability that this teacher is more than 40 years old.

.....

(2)

Q22

(Total 5 marks)

Leave blank

23. David buys some stamps.
Each stamp costs 25p.
The total cost of the stamps is £3

(a) Work out the number of stamps David buys.

.....

(2)

Adam, Barry and Charlie each buy some stamps.
Adam buys x stamps.
Barry buys three times as many stamps as Adam.

(b) Write down an expression, in terms of x, for the number of stamps Barry buys.

.....

(1)

Charlie buys 5 more stamps than Adam.

(c) Write down an expression, in terms of x, for the number of stamps Charlie buys.

.....

(1)

Q23

(Total 4 marks)

Leave blank

24.

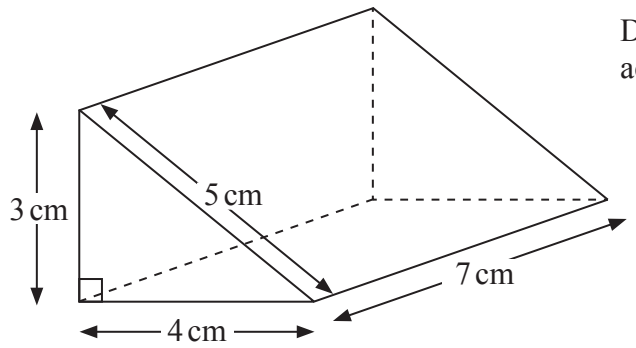


Diagram **NOT** accurately drawn

Work out the total surface area of the triangular prism.

..... cm^2

(Total 3 marks)

Q24

Turn over

Leave blank

25. Using the information that

$$4.8 \times 34 = 163.2$$

write down the value of

(a) 48×34

.....

(1)

(b) 4.8×3.4

.....

(1)

(c) $163.2 \div 48$

.....

(1) **Q25**

(Total 3 marks)

26. Work out an estimate for $\dfrac{302 \times 9.96}{0.51}$

.....

Q26

(Total 3 marks)

Leave blank

27. In the space below, use ruler and compasses to **construct** an equilateral triangle with sides of length 6 centimetres.
You must show all your construction lines.

One side of the triangle has already been drawn for you.

Q27

(Total 2 marks)

28. $-2 \leqslant x < 3$
x is an integer.

Write down all the possible values of x.

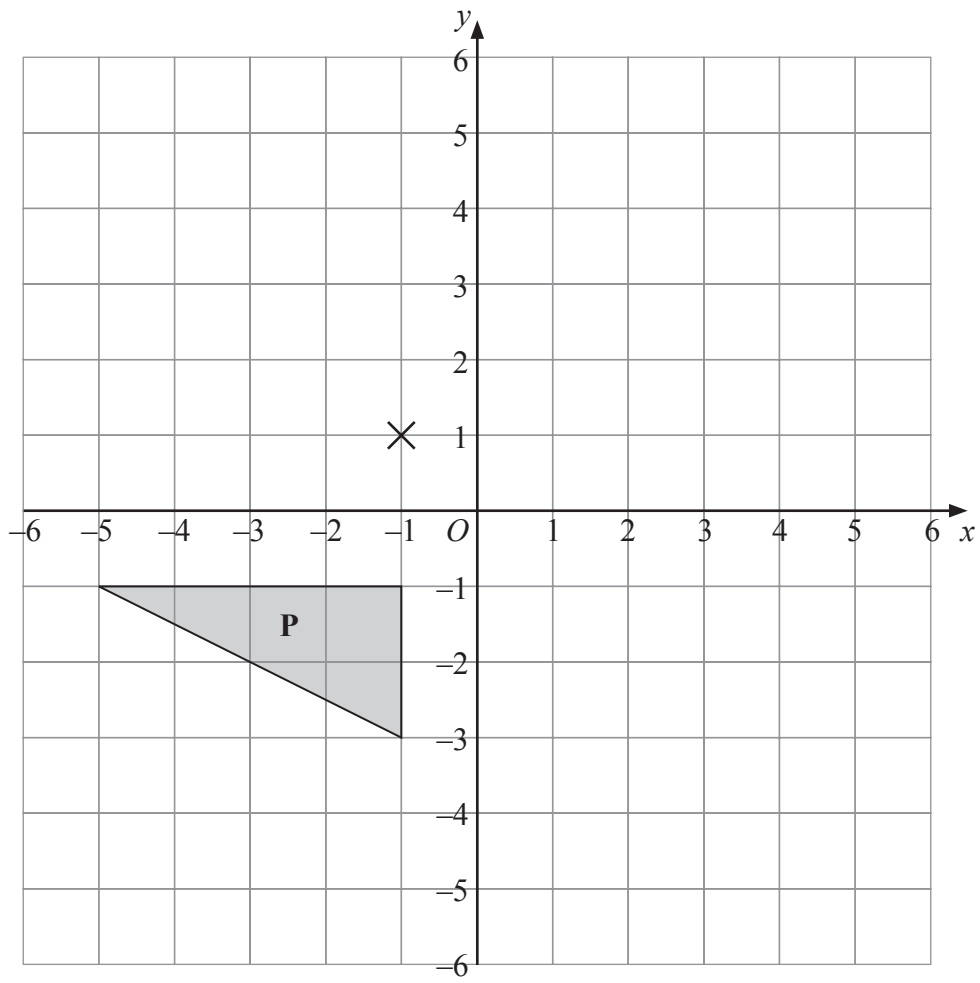
.....

Q28

(Total 2 marks)

Leave blank

29.



(a) Rotate triangle **P** 180° about the point (–1, 1).

Label the new triangle **A**.

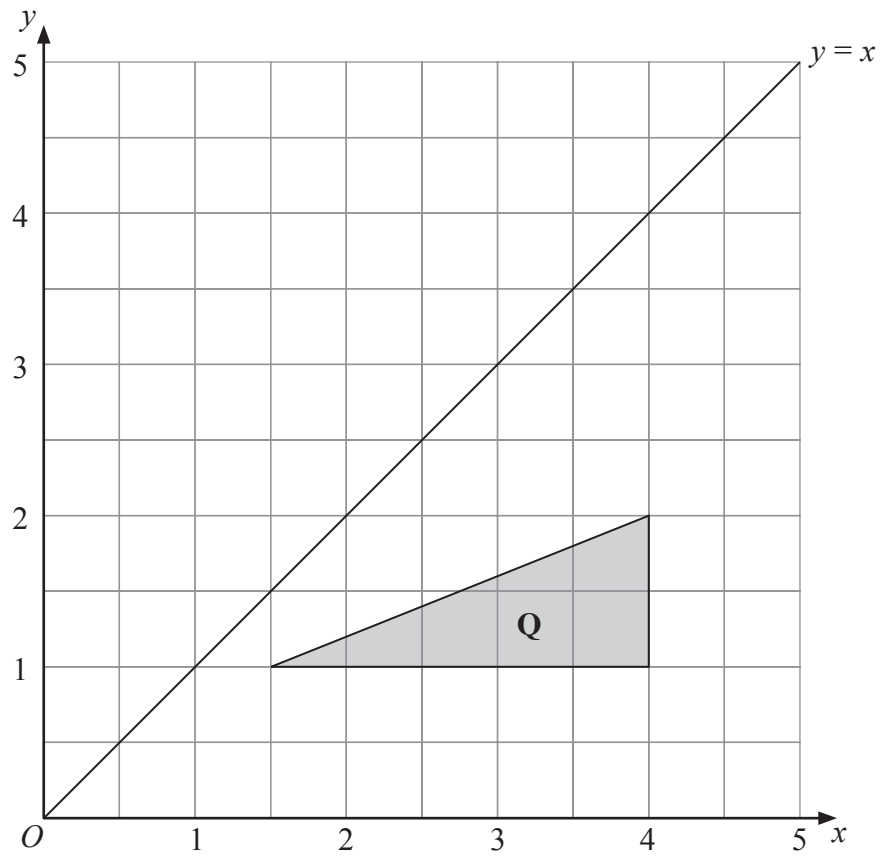
(2)

(b) Translate triangle **P** by the vector $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$.

Label the new triangle **B**.

(1)

Leave blank



(c) Reflect triangle **Q** in the line $y = x$.

Label the new triangle **C**.

(2) **Q29**

(Total 5 marks)

TOTAL FOR PAPER: 100 MARKS

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