Centre No.						Paper Reference							Surname Answers	Initial(s)
Candidate No.						1	3	8	0	/	1	F	Signature	

Paper Reference(s)

1380/1F

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 1 (Non-Calculator)

Foundation Tier

Monday 6 June 2011 – Afternoon

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.

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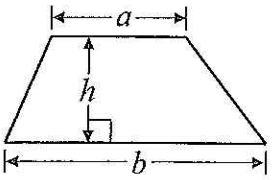
GCSE Mathematics (Linear) 1380

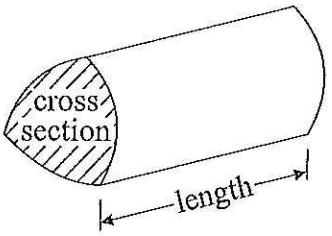
Formulae: Foundation Tier

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 × 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. The table gives some information about the number of medals won by each of 6 countries in the 2008 Olympic Games.

Country	Gold	Silver	Bronze	Total
Great Britain	19	13	15	47
France	7	16	17	40
Germany	16	10	15	41
Italy	8	10	10	28
Spain	5	10	3	18
Poland	3	6	1	10

(a) Write down the number of Gold medals won by Germany.

16

(1)

(b) Write down the country that won the most Bronze medals.

France

(1)

(c) Write down the country that won the same number of Silver medals as Bronze medals.

Italy

(1)

Q1

(Total 3 marks)

Leave blank

2. (a) Write the number 1345 in words.

One thousand Three hundred and Forty Five

(1)

(b) Write the number **twelve thousand seven hundred and fifty** in figures.

12750

(1)

(c) Write the number 4670 to the nearest hundred.

4700

(1)

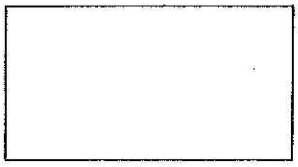
Q2

(Total 3 marks)

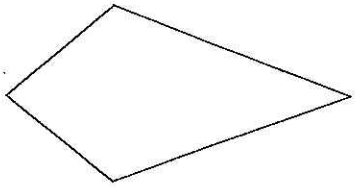
3. (a) Here are two quadrilaterals.

Write down the mathematical name of each quadrilateral.

(i)



(ii)

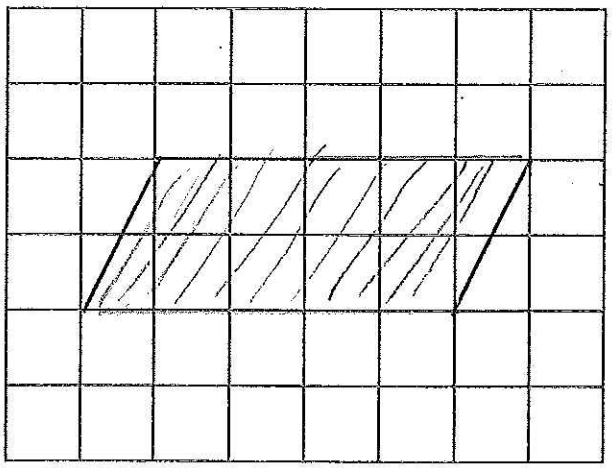


(i) Rectangle

(ii) Kite

(2)

(b) On the grid, draw a parallelogram.



(1)

Q3

(Total 3 marks)

Leave blank

4. Simone and Barry use this rule to work out their pay.

Pay = £6.20 × number of hours worked

Simone works for 4 hours.

(a) Work out her pay.

6.20
6.20
6.20
+ 6.20
24.80

£ 24.80
(2)

Barry's pay is £15.50

(b) How many hours did he work?

15.50 ÷ 6.20 = 2.5

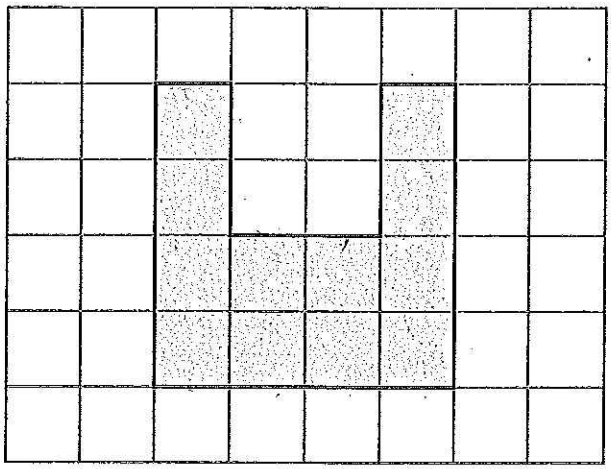
2.5 hours
(2)

Q4

(Total 4 marks)

Leave blank

5. This shaded shape is drawn on a grid of centimetre squares.



(a) (i) Find the perimeter of the shaded shape.

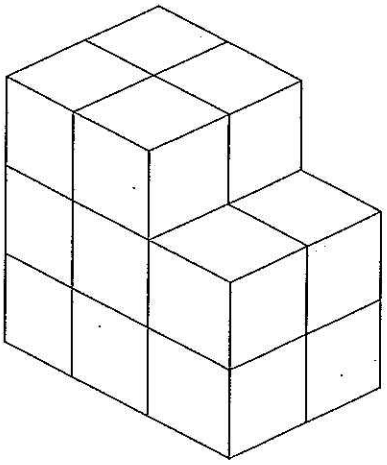
20 ..... cm

(ii) Find the area of the shaded shape.

12 ..... cm^2

(2)

This solid prism is made from centimetre cubes.



(b) Find the volume of the prism.

16 ..... cm^3

(1)

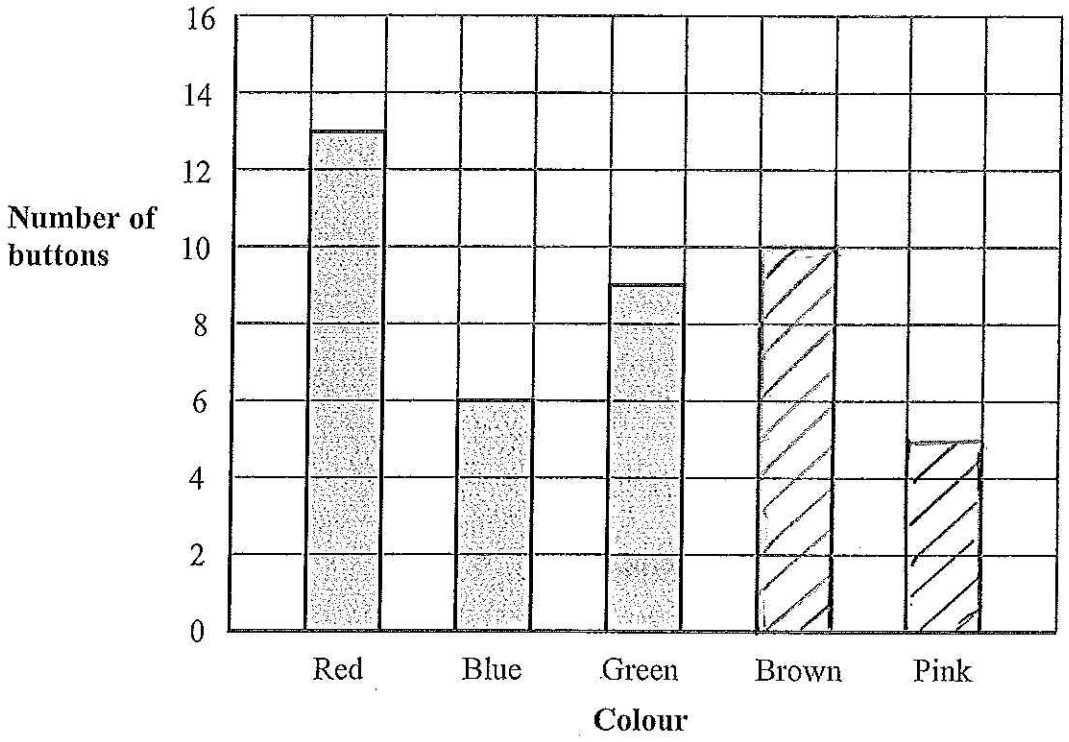
Q5

(Total 3 marks)

Leave blank

6. The incomplete table and bar chart give some information about the colours of buttons in a box.

Colour	Number of buttons
Red	13
Blue	6
Green	9
Brown	10
Pink	5



(a) Use the bar chart to complete the table.

(2)

(b) Use the table to complete the bar chart.

(2) **Q6**

(Total 4 marks)

Leave blank

7. (a) Write $\frac{10}{3}$ as a mixed number.

$3\frac{1}{3}$

(1)

(b) Here are two fractions

$$\frac{3}{5} \text{ and } \frac{2}{3}$$

Which is the larger fraction?
You must show your working to explain your answer.

$\frac{3}{5} \overset{\times 3}{=} \frac{9}{15}$ $\quad$ $\frac{2}{3} \overset{\times 5}{=} \frac{10}{15}$

$\frac{2}{3}$ is bigger because it is $\frac{1}{15}$ more than $\frac{3}{5}$

$\frac{2}{3}$ is the largest

(3)

(c) Work out $\frac{4}{5} \times \frac{3}{8}$

Give your fraction in its simplest form.

$4 \times 3 = 12$
$5 \times 8 = 40$

$\frac{12}{40} = \frac{6}{20} = \frac{3}{10}$

$\frac{3}{10}$

(2)

(Total 6 marks)

Q7

Leave blank

8. (a) Write down the value of $\sqrt{36}$

6

.....

(1)

(b) Estimate $\sqrt{200}$

Explain how you got your answer.

$13^2 = 10\ 3$

	10	3
10	100	30
3	30	9

100 + 30 + 30 + 9 = 169

$14^2 = 10\ 4$

	10	4
10	100	40
4	40	16

100 + 40 + 40 + 16 = 196

$15^2 = 10\ 5$

	10	5
10	100	50
5	50	25

100 + 50 + 50 + 25 = 225

In between 14 and 15 but closer to 14

.....

14.1

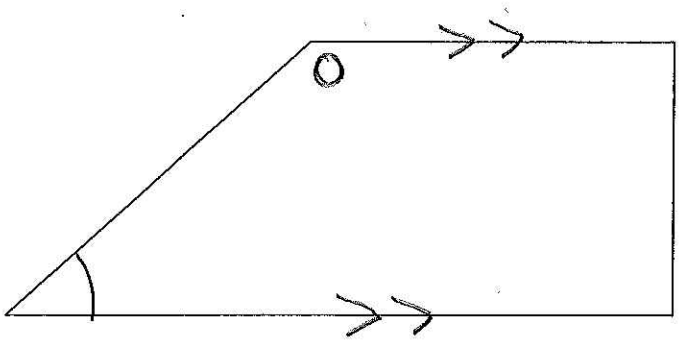
.....

(2)

(Total 3 marks)

Q8

9. Here is a trapezium.



In the trapezium,

(i) mark with arrows (> >) the pair of parallel lines,

(ii) mark with the letter O the obtuse angle,

(iii) measure the size of the acute angle.

42 °

.....

(Total 3 marks)

Q9

Leave blank

10. Here are the first four terms in a number sequence.

7 12 17 22 27 32 37 42 47 52

5 5 5

(a) (i) Write down the next term in this number sequence.

27

(ii) Give a reason for your answer.

The pattern is increasing by 5

(2)

(b) Work out the tenth term in this number sequence.

52

(1)

(c) Robert says,

'The hundredth term in this number sequence is 504'.

He is **wrong**.
Explain why.

The hundreth term would have to end in a 2 or a 7

(1)

(Total 4 marks)

Q10

Leave blank

11. (a) Work out 700 – 547

$$\begin{array}{r} 6\,9\,10 \\ 7\,\not{0}\,\not{0} \\ -\;5\,4\,7 \\ \hline 1\,5\,3 \end{array}$$

153

(1)

(b) Work out 354 × 26

×	300	50	4
20	6000	1000	80
6	1800	300	24

6000
1800
1000
300
80
24
9204
1 1

9204

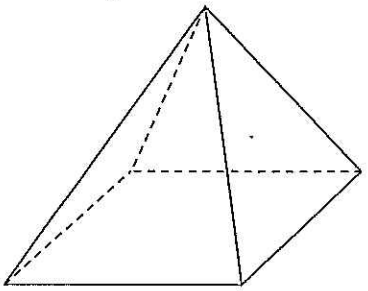
(3)

(Total 4 marks)

Q11

Leave blank

12. Here is a diagram of a solid 3-D shape.



(a) Write down the mathematical name of the 3-D shape.

Square Based Pyramid

(1)

(b) Write down the number of faces.

5

(1)

(c) Write down the number of edges.

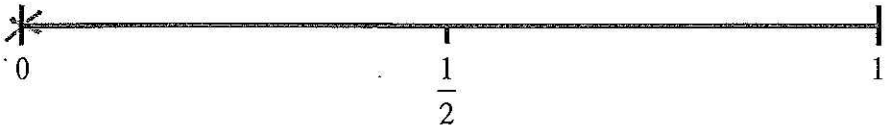
8

(1)

Q12

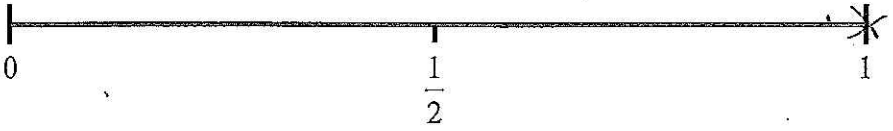
(Total 3 marks)

13. (a) On the probability scale below, mark with a cross (×) the probability that a boy will grow to a height of 5 metres.



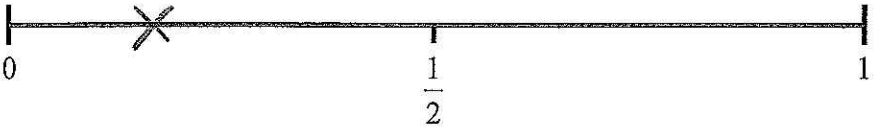
(1)

(b) On the probability scale below, mark with a cross (×) the probability that the sun will rise tomorrow.



(1)

(c) On the probability scale below, mark with a cross (×) the probability that you will get a 6 when you roll a fair dice.



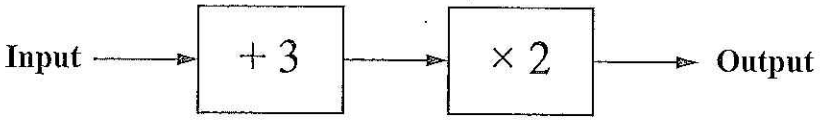
(1)

Q13

(Total 3 marks)

Leave blank

14. Here is a two-stage number machine.



The machine adds 3 and then multiplies by 2

Complete the table.

7 + 3 = 10

10 × 2 = 20

Input	Output
2	10
5	16
7	20
15	36

36 ÷ 2 = 18

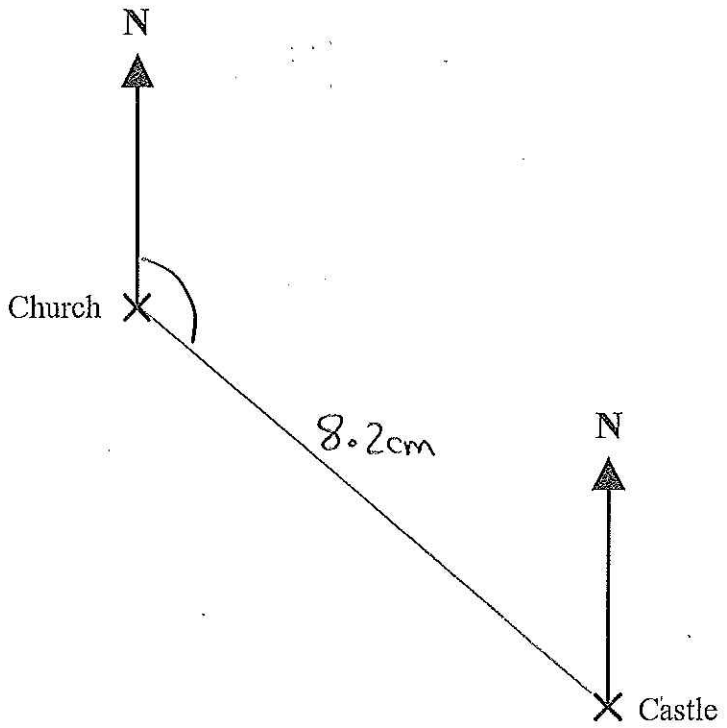
18 − 3 = 15

Q14

(Total 2 marks)

Leave blank

15. The diagram shows part of a map.
It shows the positions of a castle and a church.



The scale of the map is 1:10 000

(a) Work out the real distance between the castle and the church.
Give your answer in metres.

$8.2 \times 10000 = 82000$ cm

$82000 \div 100 = 820$ m

820 m
(2)

(b) Find the bearing of the castle from the church.

130°
(1)

Q15

(Total 3 marks)

Leave blank

16. The table shows part of a train timetable from Weymouth to London Waterloo.

Weymouth	09 03	09 20	10 03	10 20	11 03
Poole	09 40	10 07	10 40	11 07	11 40
Bournemouth	09 53	10 17	10 54	11 17	11 54
Southampton	10 26	10 58	11 28	11 58	12 28
Woking	11 19		12 19		13 19
London Waterloo	11 49	12 20	12 49	13 20	13 49

A train leaves Weymouth at 09 03

(a) At what time should it arrive at London Waterloo?

11.49

(1)

Another train leaves Poole at 11 40

(b) How many minutes should it take to travel to Bournemouth?

14 minutes

(1)

Sally lives in Weymouth.

She has a meeting in Southampton at 12 00
When Sally arrives at Southampton she takes 25 minutes to travel to her meeting.

(c) What is the time of the latest train she can take from Weymouth?

10.03

(1)

Q16

(Total 3 marks)

Leave blank

17. Work out an estimate for $\dfrac{7.19 \times 19.7}{0.46}$

$\dfrac{7 \times 20}{0.5} = \dfrac{140}{0.5}$

dividing by 0.5 is the same as Multiplying by 2

$140 \times 2 = 280$

280

Q17

(Total 3 marks)

18. The two-way table shows some information about where 50 people went to university.

	Scotland	Wales	England	Total
Male	3	3	19	25
Female	4	5	16	25
Total	7	8	35	50

(a) Complete the two-way table.

(3)

One of these people is picked at random.

(b) Work out the probability that this person

(i) went to university in Scotland,

$\dfrac{7}{50}$

(ii) is a female who did **not** go to university in England.

$4 + 5 = 9$

$\dfrac{9}{50}$

(2)

Q18

(Total 5 marks)

Leave blank

19. Amy buys 50 computers.
She pays £160 for each computer.

Amy is going to sell **some** of the computers.
She wants to get at least 35% more than she paid for **all** the computers.
She is going to sell each computer for £400

Work out the smallest number of computers Amy needs to sell.

50 x 160

	50
100	5000
60	3000

5000
+ 3000
8000

10% of 8000 = 800
5% of 8000 = 400

35% of 8000 = 800
800
800
+ 400
2800

8000
+ 2800
10800

10800 ÷ 400 = 27

27

(Total 4 marks)

Q19

Leave blank

20. The table gives the maximum speeds of two cars, car A and car B.

	Car A	Car B
Maximum speed	184 km/h	120 mph

Which car has the greater maximum speed?
You must show clearly how you get your answer.

184 × 5

	100	80	4
5	500	400	20

920

$8\overline{)920} = 115$

Car B has a greater speed by 5 mph

Q20

(Total 2 marks)

21. $H = 2a + 3b$
$a = 5$
$b = -1$

(a) Work out the value of H.

$H = (2 \times 5) + (3 \times -1)$

$H = 10 - 3$

$H = 7$

$H = 7$

(2)

$P = 3h^2$
$h = -4$

(b) Work out the value of P.

$P = 3 \times -4^2$

$= 3 \times 16$

$= 48$

$P = 48$

(2)

Q21

(Total 4 marks)

Leave blank

22. Some students went to the cinema.
Each student watched film A or film B or film C.

$\frac{3}{8}$ of the students watched film A.

40% of the students watched film B.

What fraction of the students watched film C?

$40\% = \frac{4}{10} = \frac{16}{40}$

$\frac{3}{8} \overset{\times 5}{=} \frac{15}{40}$ ($\times 5$)

$\frac{15}{40} + \frac{16}{40} = \frac{31}{40}$

$1 - \frac{31}{40} = \frac{9}{40}$

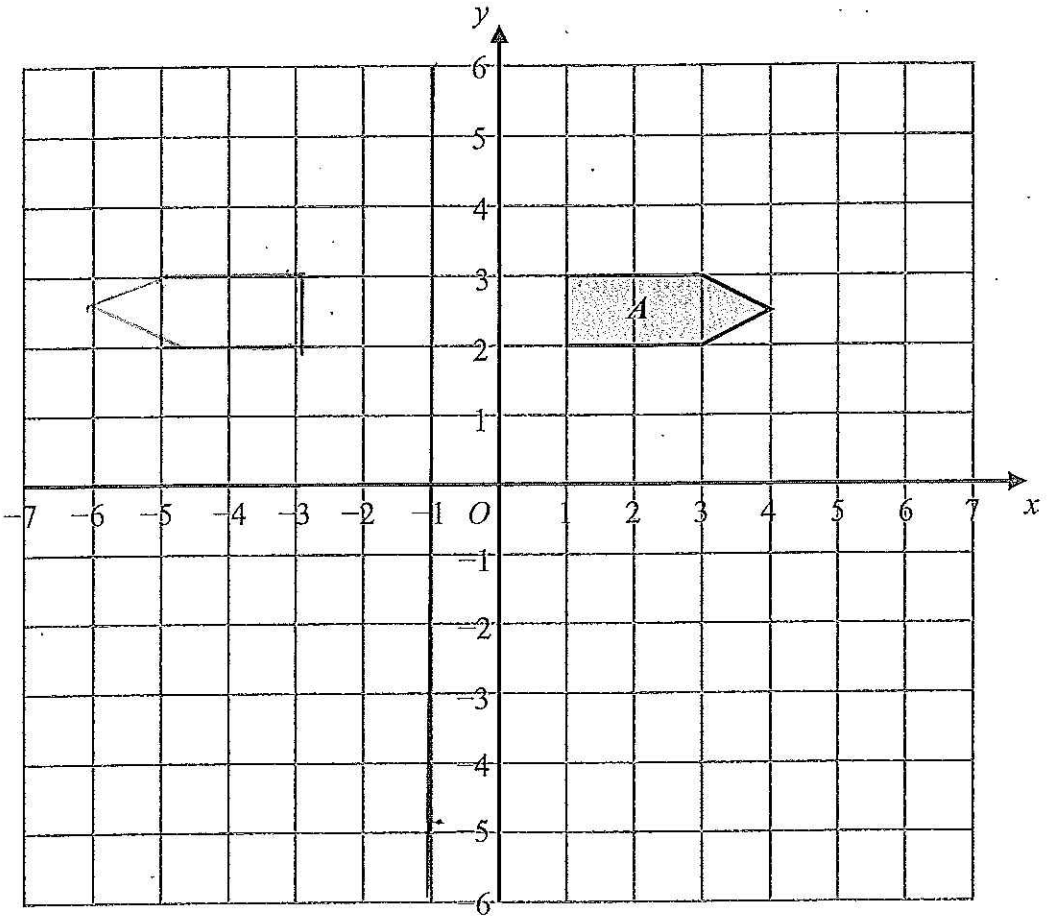
$\frac{9}{40}$

(Total 3 marks)

Q22

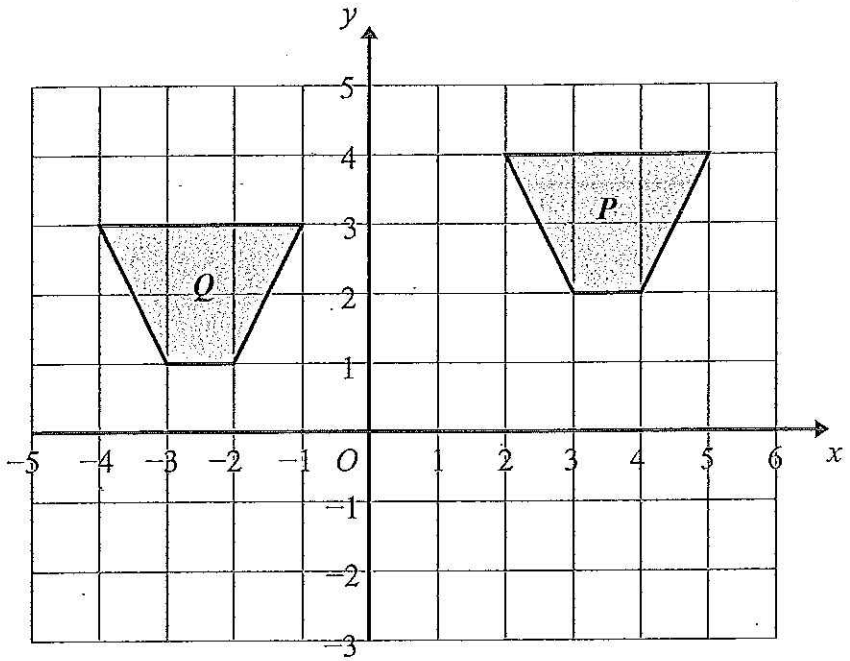
Leave blank

23.



(a) On the grid above, reflect shape A in the line $x = -1$.

(2)



(b) Describe fully the single transformation that will map shape ***P*** onto shape ***Q***.

Translation $\begin{pmatrix} -6 \\ -1 \end{pmatrix}$

Q23

(2)

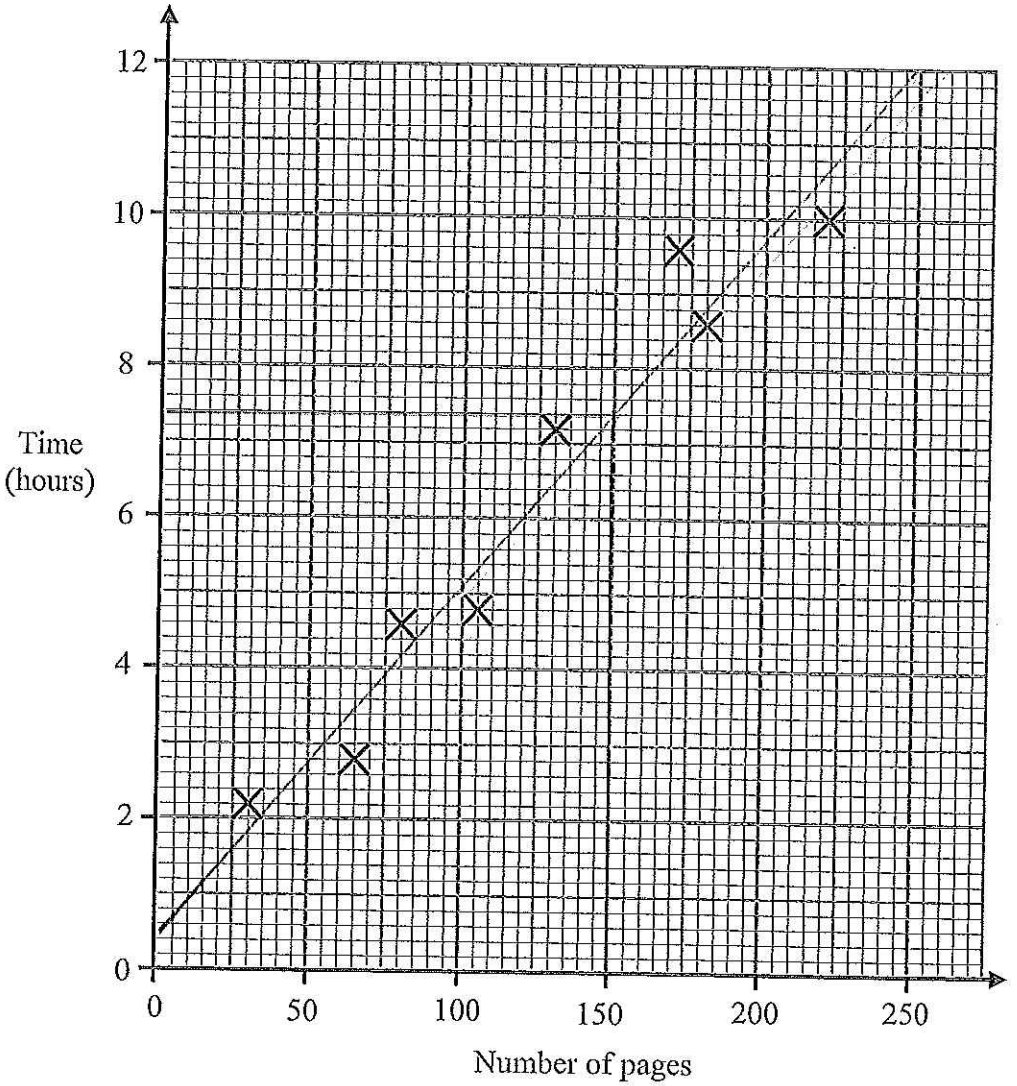
(Total 4 marks)

Leave blank

24. Harriet reads eight books.

For each book she records the number of pages and the time she takes to read it.

The scatter graph shows information about her results.



(a) Describe the relationship between the number of pages in a book and the time Harriet takes to read it.

Positive Correlation

(1)

Harriet reads another book.
The book has 150 pages.

(b) Estimate the time it takes Harriet to read it.

7.4 hours

(2)

(Total 3 marks)

Q24

Leave blank

25.

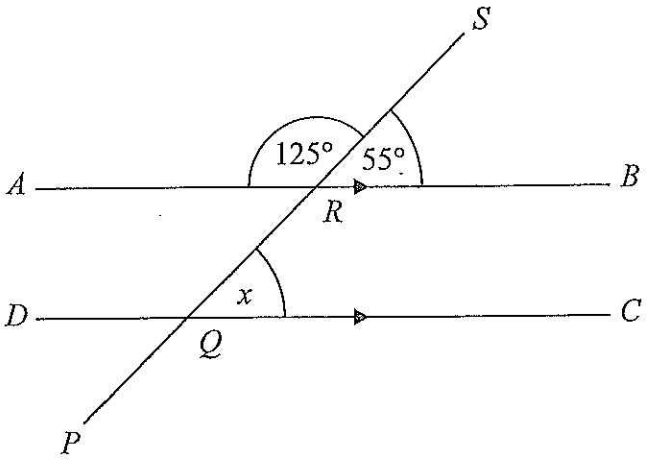


Diagram **NOT** accurately drawn

ARB is parallel to *DQC*.

PQRS is a straight line.

Angle *SRB* = 55°.

(i) Find the size of the angle marked *x*.

55 °

(ii) Give a reason for your answer.

Corresponding Angles

Q25

(Total 2 marks)

26. (a) Expand $x(x + 2)$

$x^2 + 2x$

(2)

(b) Factorise $15x - 10$

$5(3x - 2)$

(2)

(c) Expand and simplify $(x + 3)(x - 4)$

×	x	$+3$
x	x^2	$+3x$
-4	$-4x$	-12

$x^2 + 3x - 4x - 12$

$x^2 - x - 12$

(2)

Q26

(Total 6 marks)

Leave blank

27. Peter, Tarish and Ben share £54

Tarish gets three times as much money as Peter.
Ben gets twice as much money as Tarish.

How much money does Ben get?

1 : 3 : 6

1 + 3 + 6 = 10

54 ÷ 10 = 5.4

5.4 × 6

5 × 6 = 30

0.4 × 6 = 2.40

30
+ 2.40
32.40

£ 32.40

Q27

(Total 3 marks)

28. Sophie wants to find out the amount of time people exercise.
She will use a questionnaire.

Design a suitable question for Sophie to use in her questionnaire.
You must include some response boxes.

How much time do you spend exercising in a week?

☐ 0 hours ☐ 1-3 hours ☐ 4-6 hours ☐ 7 or more hours

Q28

(Total 2 marks)

Leave blank

29.

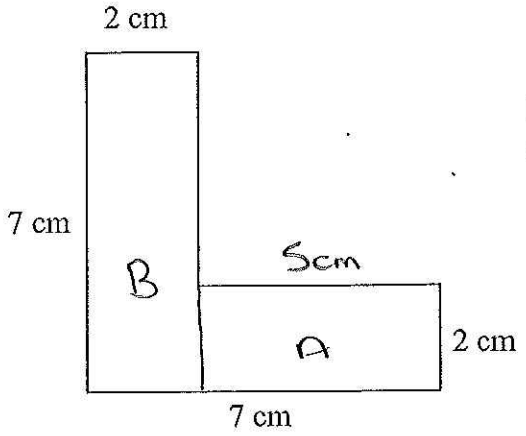


Diagram **NOT** accurately drawn

The diagram shows the cross-section of a solid prism.
The length of the prism is 2 m.

The prism is made from metal.
The density of the metal is 8 grams per cm^3.

Work out the mass of the prism.

$A = 5 \times 2 = 10\ cm^2$

$B = 7 \times 2 = 14\ cm^2$

$10 + 14 = 24\ cm^2$

$2m = 200cm$

24×200

	200
20	4000
4	800

$4000 + 800 = 4800\ cm^3$

4800×8

	8
4000	32000
800	6400

$32000 + 6400 = 38400$

38400g

Q29

(Total 5 marks)

TOTAL FOR PAPER: 100 MARKS

END