

Centre No.						Paper Reference	Surname <i>Correction</i>	Initial(s)
Candidate No.						<b>1 3 8 0 / 3 H</b>	Signature <i>M. Semar -</i>	

Paper Reference(s)

**1380/3H**

**Edexcel GCSE**

**Mathematics (Linear) – 1380**

**Paper 3 (Non-Calculator)**

**Number**

**Past Paper Questions**

**Arranged by Topic**

Examiner's use only

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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 26 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.

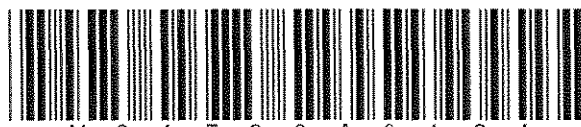
Work steadily through the paper. Do not spend too long on one question.

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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Compiled by Peter Bland



N 3 4 7 3 0 A 0 1 2 4

*Turn over*

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Answer ALL TWENTY questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. Using the information that

$$74 \times 234 = 17316$$

write down the value of

$$(a) 740 \times 234 = 74 \times 10 \times 234 = 17316 \times 10$$

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

$$(b) 74 \times 2.34 = 74 \times 234 \div 100$$

$$= 17316 \div 100$$

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

Q1

(Total 2 marks)

2. Work out an estimate for the value of

$$\frac{31 \times 4.92}{0.21}$$

$$31 = 30 \text{ (1sf)}$$

$$4.92 = 5 \text{ (1sf)}$$

$$0.21 = 0.2 \text{ (1sf)}$$

$$\frac{30 \times 5}{0.2} = \frac{150}{0.2} = \frac{1500}{2}$$

$$\begin{array}{r} 750 \\ \hline \end{array}$$

Q2

(Total 3 marks)



3. (a) Work out  $\frac{3}{8} + \frac{1}{4} = \frac{3}{8} + \frac{1 \times 2}{8}$

Give your answer in its simplest form.

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

$$\begin{array}{r} 5 \\ \hline 8 \end{array} \quad (2)$$

(b) Work out  $\frac{2}{3} \times \frac{4}{5} = \frac{2 \times 4}{3 \times 5}$

$$\begin{array}{r} 8 \\ \hline 15 \end{array} \quad (2)$$

(c) Work out  $423 \times 12$

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

$$\begin{array}{r} 423 \\ \times 12 \\ \hline 846 \\ 423 \phantom{0} \\ \hline 5076 \end{array}$$

$$\begin{array}{r} 5076 \\ \hline \end{array} \quad (3)$$

Q3

(Total 7 marks)



4. 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* .....

2 ..... *No time limit* .....

(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 do you spend on your mobile phone per month?*

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
£1-5	£5 <sup>+</sup> -10	£10 <sup>+</sup> -15	15 <sup>+</sup> over

(2)

Q4

(Total 4 marks)



5. (a) A solid cube has sides of length 5 cm.

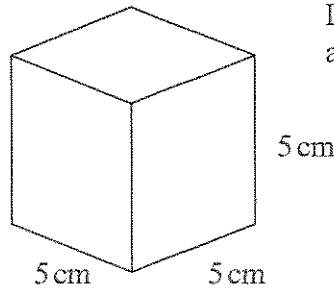


Diagram NOT accurately drawn

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

*Cube has 6 faces*

*1 face area =  $5 \times 5 = 25 \text{ cm}^2$*

*Total surface area =  $6 \times 25$*

*150 cm<sup>2</sup>*  
.....  
(4)

The volume of the cube is  $125 \text{ cm}^3$ .

*1 cm = 10 mm.*

(b) Change  $125 \text{ cm}^3$  into  $\text{mm}^3$ .

*1 cm<sup>3</sup> =  $10 \times 10 \times 10 \text{ mm}^3$*

*$125 \text{ cm}^3 = 125 \times 1000 \text{ mm}^3$*

*125 000* .....  $\text{mm}^3$   
(2)

The weight of the cube is 87 grams, correct to the nearest gram.

(c) (i) What is the minimum the weight could be?

*$87 + 0.5$*

*87.5* ..... grams

(ii) What is the maximum the weight could be?

*$87 - 0.5$*

*86.5* ..... grams  
(2)


(Total 8 marks)



6. A tin of cat food costs 40p.  
A shop has a special offer on the cat food.

**Special offer**

Pay for 2 tins and get 1 tin free



Julie wants 12 tins of cat food.

- (a) Work out how much she pays.

4x( 3 tins for 80 pence  
12 tins for 80 x 4 pence

3.20  
£ .....  
(3)

The normal price of a cat basket is £20  
In a sale, the price of the cat basket is reduced by 15%.

- (b) Work out the sale price of the cat basket.

Sale price = 85% of £20

= 0.85 x 20  
=  $\frac{85}{100} \times \frac{20}{1} = \frac{85}{5}$  £ ..... 17 .....  
(3)

$$\begin{array}{r} 17 \\ 5 \overline{)85} \end{array}$$

(Total 6 marks)



7. Work out

$$\frac{2}{5} + \frac{1}{7} = \frac{2 \times 7}{35} + \frac{1 \times 5}{35}$$

$$= \frac{14}{35} + \frac{5}{35}$$

$$= \frac{19}{35}$$

$$\frac{19}{35}$$

Q7

(Total 2 marks)

8.

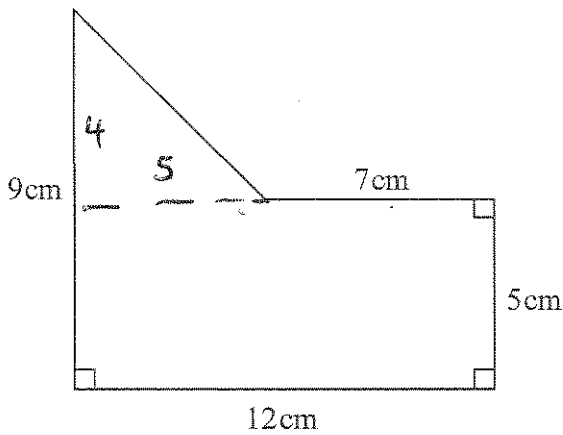
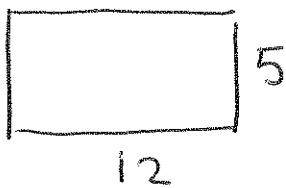
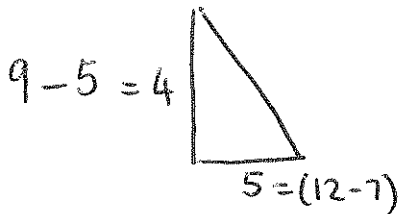


Diagram NOT accurately drawn

Work out the area of the shape.



$$\text{Area} = 12 \times 5 = 60 \text{ cm}^2$$



$$\text{Area} = \frac{4 \times 5}{2} = 10 \text{ cm}^2$$

$$70 \text{ cm}^2$$

Q8

(Total 4 marks)



9. Use the information that

$$322 \times 48 = 15456$$

to find the value of

(a)  $3.22 \times 4.8 = 15456 \div 1000$

$$\underline{15.456} \quad (1)$$

(b)  $0.322 \times 0.48 = 15456 \div 100000$

$$\frac{322}{1000} \times \frac{48}{100}$$

$$\underline{0.15456} \quad (1)$$

(c)  $15456 \div 4.8$

$$15456 \div 48 = 322$$

$$15456 \div 4.8 = 3220$$

$$\underline{3220} \quad (1)$$

(Total 3 marks)

Q9

10.  $2x^2 = 72$

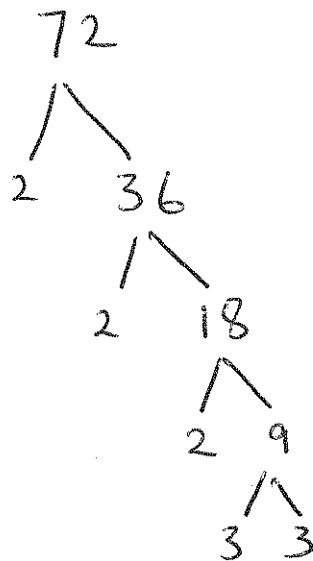
(a) Find a value of  $x$ .

$$x^2 = \frac{72}{2} = 36$$

$$x = \pm 6$$

$$\underline{\pm 6} \quad (2)$$

(b) Express 72 as a product of its prime factors.



$$\underline{2 \times 2 \times 2 \times 3 \times 3} \quad (2)$$

or  $2^3 \times 3^2$

(Total 4 marks)

Q10





11. Here are the ingredients needed to make 8 pancakes.

Pancakes
Ingredients to make 8 pancakes
300 ml milk
1 egg
120 g flour
5 g butter

Jacob makes 24 pancakes.

(a) Work out how much milk he needs.

$$8 \times 3 = 24 \text{ pancakes}$$

$$300 \times 3 = 900 \text{ ml}$$

..... 900 ..... ml  
(2)

Cathie makes 12 pancakes.

(b) Work out how much flour she needs.

8 pancakes need 120g	
4 pancakes need 60g	
12 pancakes need 180g	..... 180 ..... g (2)

(Total 4 marks)

Q11



12. 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.

$$5.40 \times 24$$

$$\begin{array}{r} 540 \\ \times 24 \\ \hline = 2160 \\ 1080 \\ \hline 12960 \end{array}$$

£ 129.60

Q2

(Total 3 marks)

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

~~35~~ 52 42 ~~27~~ ~~36~~  
~~23~~ ~~31~~ ~~41~~ 50 ~~34~~  
44 ~~28~~ 45 45 53

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

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

Key:

4|5 means

45 years

Q3

(Total 3 marks)



14. Using the information that

$$4.8 \times 34 = 163.2$$

write down the value of

(a)  $48 \times 34$

$$48 = 4.8 \times 10$$

$$\begin{array}{r} 1632 \\ \hline \end{array} \quad (1)$$

(b)  $4.8 \times 3.4$

$$\begin{array}{r} 16.32 \\ \hline \end{array} \quad (1)$$

(c)  $163.2 \div 48$

$$163.2 \div 4.8 = 34$$

$$163.2 \div 48 = 3.4$$

$$\begin{array}{r} 3.4 \\ \hline \end{array} \quad (1)$$

Q14

(Total 3 marks)

15.

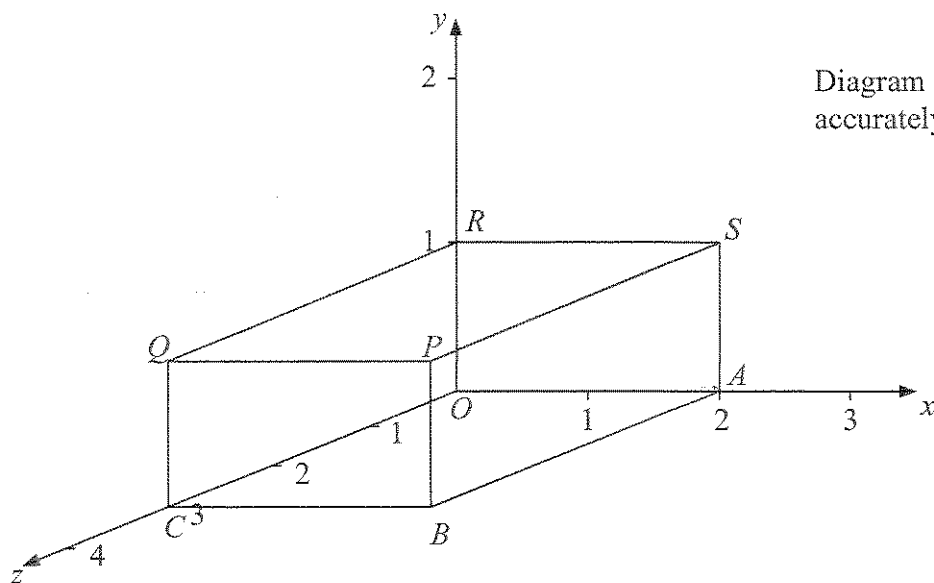


Diagram NOT accurately drawn

A cuboid is shown on a 3-dimensional grid.

(a) Write down the letter of the point with coordinates (2, 1, 0).

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

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

$$\begin{array}{r} (2, 1, 0) \\ \hline \end{array} \quad (1)$$

Q15

(Total 2 marks)



16. This rule is used to work out the total cost, in pounds, of hiring a carpet cleaner.

Multiply the number of days' hire by 4  
Add 6 to your answer

Peter hires a carpet cleaner.  
The total cost is £18

(a) Work out for how many days he hires the carpet cleaner.

$$18 = d \times 4 + 6$$

$$18 - 6 = 4d \quad \dots\dots\dots 3 \quad \text{days}$$

$$12 = 4d \quad \therefore d = 3 \quad (2)$$

(b) Write down an expression, in terms of  $n$ , for the total cost, in pounds, of hiring a carpet cleaner for  $n$  days.

Total Cost =  $4n + 6$

↑  
number of days -

$4n + 6$  ..... (2)

Q16

(Total 4 marks)



17.

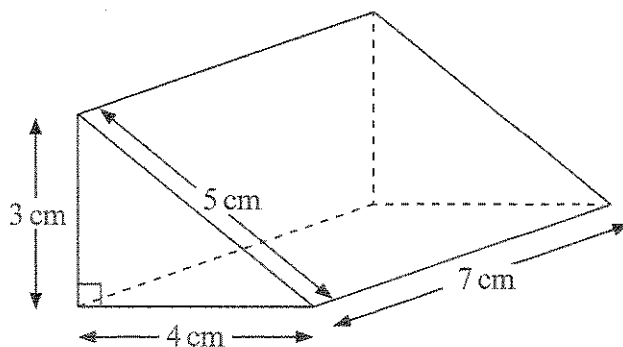


Diagram NOT accurately drawn

Work out the total surface area of the triangular prism.  
Give the units with your answer.

$$\bullet \text{ 2 triangles: } 2 \times \frac{4 \times 3}{2} = 12 \text{ cm}^2$$

\bullet 3 different rectangles:

$$7 \times 5 = 35 \text{ cm}^2$$

$$4 \times 7 = 28 \text{ cm}^2$$

$$3 \times 7 = 21 \text{ cm}^2$$

$$\text{Total} = 12 + 35 + 28 + 21$$

$$\dots\dots\dots 96 \text{ cm}^2$$

Q7

(Total 4 marks)



18. Work out an estimate for  $\frac{302 \times 9.96}{0.51}$

(Round to 1sf).

$302 = 300$        $9.96 = 10$        $0.51 = 0.5$

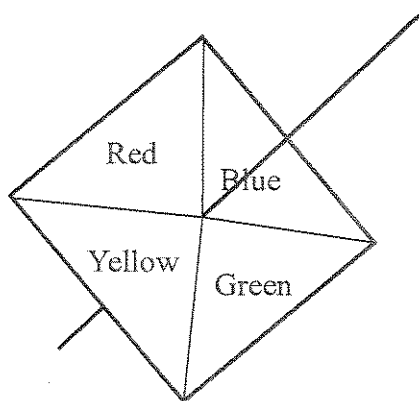
$$\frac{300 \times 10}{0.5} = \frac{3000}{0.5} = \frac{30000}{5}$$

..... 6000 .....

Q18

(Total 3 marks)

19. Here is a 4-sided spinner.



The sides of the spinner are labelled Red, Blue, Green and Yellow.

The spinner is biased.

The table shows the probability that the spinner will land on each of the colours Red, Yellow and Green.

Colour	Red	Blue	Green	Yellow
Probability	0.2	0.4	0.3	0.1

Work out the probability the spinner will land on Blue.

$$P(\text{Blue}) = 1 - (0.2 + 0.3 + 0.1)$$

$$= 1 - 0.6$$

..... 0.4 .....

Q9

(Total 2 marks)



20. (a) Write down the reciprocal of 4

Reciprocal of  $a \rightarrow \frac{1}{a}$

$$\frac{1}{4} \quad (1)$$

(b) Work out the value of  $2\frac{4}{5} - 1\frac{3}{4}$

Give your answer as a fraction in its simplest form.

$$\frac{2 \times 5 + 4}{5} - \frac{1 \times 4 + 3}{4} = \frac{14}{5} - \frac{7}{4}$$

$$= \frac{56}{20} - \frac{35}{20} = \frac{21}{20} = 1\frac{1}{20}$$

OR

$$2 - 1 = 1$$

$$\frac{4}{5} - \frac{3}{4} = \frac{16}{20} - \frac{15}{20}$$

$$= \frac{16 - 15}{20} = \frac{1}{20}$$

Answer  $1\frac{1}{20}$

(c) Sundas says that  $4\frac{1}{3}$  is equal to 4.3

Sundas is wrong.  
Explain why.

$$\frac{1}{3} = 0.33333 \dots = 0.\dot{3}$$

$$4\frac{1}{3} \text{ is } 4.\dot{3}$$

(1)

Q20

(Total 5 marks)



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