

Practice Questions

for Edexcel iGCSE Maths A Foundation Paper 2 2026

Topics covered:

Geometry & Measure:	Angles in parallel lines Angles in Polygons Similar shapes including volume/area (so ratio linked) Trigonometry Transformations Bearings and Construction
Statistics and Probability	Probability Venn diagrams Pie Charts Grouped data Averages and Range
Algebra:	Quadratics Expanding, factorising and simplifying
Numbers:	Show that with mixed number, expect division or multiplication Ratios and proportion

These are past exam questions on topics that were not covered much in Paper 1. This paper is not intended to be sat in one go! It has several questions on the same topics – it is not a predicted paper – rather practice on topics that may be more likely to come up as they were not covered much in paper 1!

All questions are taken from Edexcel iGCSE past papers.

Questions

Q1.

Here are nine road signs.



A



B



C



D



E



F



G



H



I

(a) The triangle in sign A has 3 equal sides.
Write down the mathematical name of this type of triangle.

..... (1)

(b) Sign B is an 8-sided polygon.
Write down the mathematical name of an 8-sided polygon.

..... (1)

(c) How many lines of symmetry has sign C?

..... (1)

(d) Write down the order of rotational symmetry of sign D.

..... (1)

(e) Change 3.8 m to centimetres.

.....cm (1)

(f) Change 300 m to kilometres.

.....km (1)

(g) Work out the length of time between 8 am and 6 pm.

.....hours (1)

(h) Write 6 pm as a time using the 24-hour clock.

..... (1)



(i) Write 16% as a decimal.

..... (1)

(j) Write 16% as a fraction.
Give your fraction in its simplest form.

..... (2)

(k) On the dotted line, write a number so that the two ratios are equivalent.

$$1 : 4 = 3 :$$

(1)

(Total for question = 12 marks)

Q2.

Roy has 2 litres of orange juice in a jug and some empty cups.
He pours orange juice from the jug to completely fill as many cups as possible.
He pours 180 millilitres of orange juice into each cup.

Work out how much orange juice Roy has left in the jug after he has completely filled as many cups as possible.
Give your answer in millilitres.

..... millilitres

(Total for question = 4 marks)

Q3.

The diagram shows a classroom wall in the shape of a trapezium.

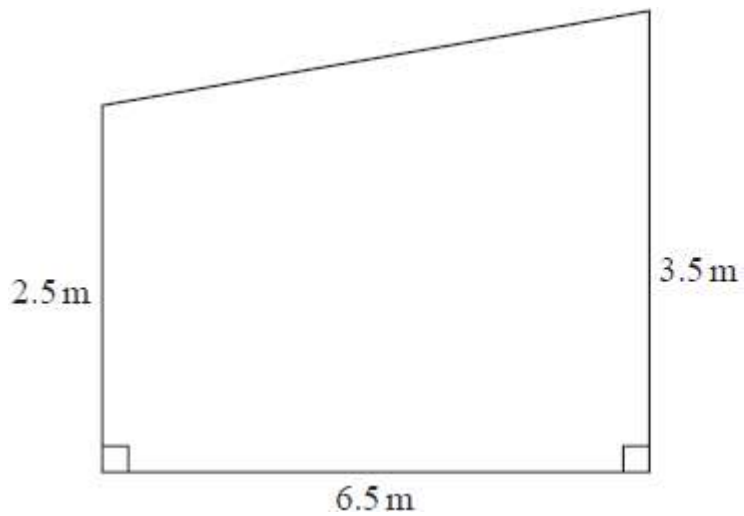


Diagram **NOT**
accurately drawn

Dion wants to paint the classroom wall completely twice.
He knows that each tin of paint will cover 12 m^2

He is going to have to buy all the paint he needs.

Work out the least number of tins of paint that Dion will need to buy.
Show your working clearly.

.....
(Total for question = 4 marks)



Q4.

(a) Find the value of $12 \div (2 - 5)$

..... (1)

(b) Find the value of 6^4

..... (1)

(c) Write down the prime number whose value is nearest to 33

..... (1)

(d) Find the cube root of 343

..... (1)

(Total for question = 4 marks)

Q5.

Mariana sells bags of bird food.

The bags that Mariana sold last week each contained 12 kg of seeds.

The bags that she is going to sell next week will each contain a mixture of nuts and seeds where for each bag

$$\text{weight of nuts} : \text{weight of seeds} = 4 : 5$$

The total weight of the nuts and the seeds in each bag will be 19.35 kg

The weight of seeds in each bag that Mariana sells next week will be less than the weight of seeds in each bag that Mariana sold last week.

Work out this decrease as a percentage of the weight of seeds in each bag that Mariana sold last week. Give your answer correct to one decimal place.

..... %

(Total for question = 4 marks)

Q6.

In a box,

number of red buttons : number of blue buttons = 5 : 3

number of blue buttons : number of green buttons = 1 : 2

There are 48 green buttons in the box.

Work out the number of red buttons in the box.

.....

(Total for question = 4 marks)

Q7.

Here is a number machine.



(a) Work out the output when the input is -2

.....

(1)

(b) Work out the input when the output is 24

.....

(2)

(Total for question = 3 marks)

Q8.

The diagram shows a shape.

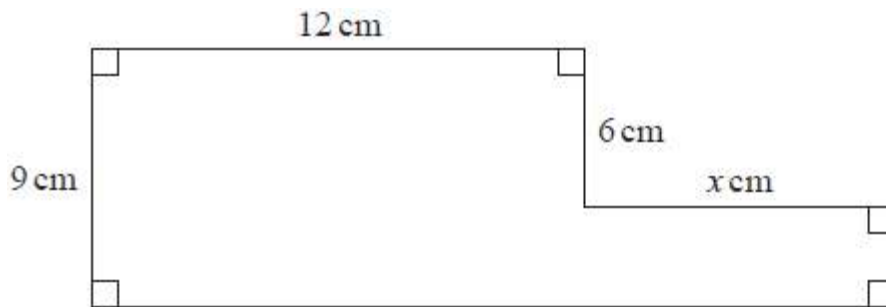


Diagram **NOT**
accurately drawn

The shape has area 129 cm^2

Work out the value of x .

$x = \dots\dots\dots$

(Total for question = 4 marks)



Q9.

Nina buys 8 pencils and 13 identical rulers.
Each pencil costs \$0.58
The total cost is \$23.62

(a) Work out the cost of each ruler.

\$
(3)

Bjorn has \$15 to spend on pens.
Each pen costs \$0.62
He buys as many pens as he can.

(b) Work out how much change Bjorn should get.

\$
(3)

(Total for question = 6 marks)



Q10.

The perimeter of a triangle is 90 cm.

The lengths of the sides of the triangle are in the ratios 3 : 5 : 7

Work out the length of the longest side of the triangle.

..... cm

(Total for question = 3 marks)

Q11.

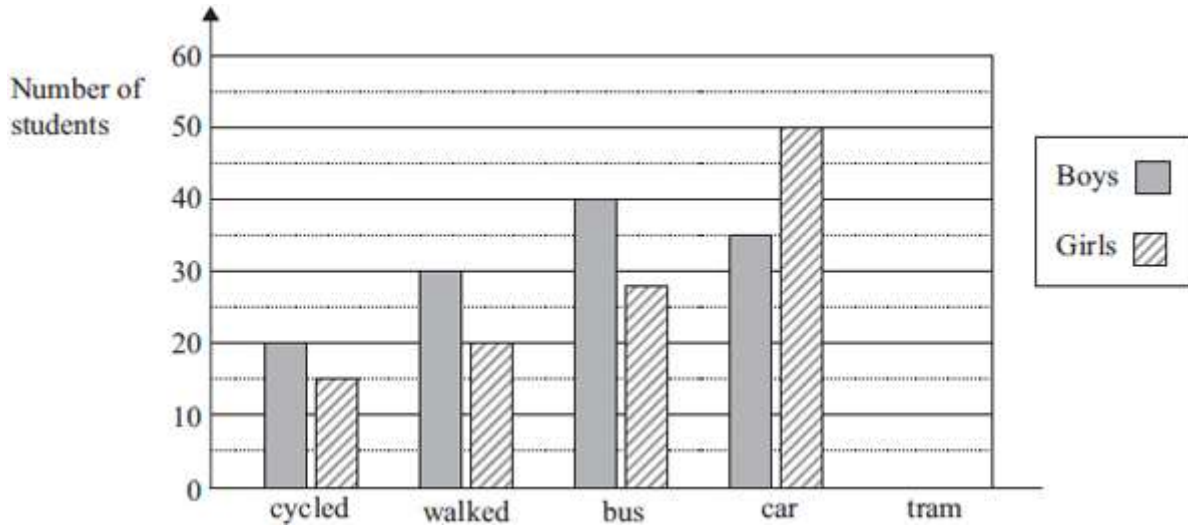
Work out the difference between the largest share and the smallest share when 3450 yen is divided in the ratios 2 : 6 : 7

..... yen

(Total for question = 3 marks)

Q12.

The bar chart shows information about how some students travelled to school one day.



(a) Write down the number of boys who walked.

..... (1)

(b) Write down the number of girls who travelled by bus.

..... (1)

(c) 25 boys and 10 girls travelled by tram.
Show this information on the bar chart.

(1)

(d) Find the ratio of the number of boys who cycled to the number of girls who cycled.
Give your ratio in its simplest form.

..... (2)

(Total for question = 5 marks)



Q13.

A school has 840 pupils and 40 teachers.

- (a) Find the ratio of the number of pupils to the number of teachers.
Give your ratio in the form $n : 1$

..... : 1
(2)

In Year 11 at the school, the ratio of the number of pupils who study Chemistry to the number of pupils who study Physics is 3 : 2

- (b) 105 pupils in Year 11 study Chemistry.
Work out the number of pupils in Year 11 who study Physics.

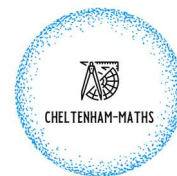
.....
(2)

For the 105 pupils who study Chemistry, the ratio of the number of boys to the number of girls is 4 : 3

- (c) Work out the number of girls in Year 11 who study Chemistry.

.....
(2)

(Total for Question is 6 marks)



Q14.

The table gives information about the numbers of medals won by Australia and Great Britain in the 2012 Paralympic Games.

	Australia	Great Britain
Gold medals	32	34
Silver medals	23	43
Bronze medals	30	43
Total	85	120

(a) What fraction of the total number of medals won by Australia were gold medals?

.....
(1)

(b) Write down the ratio of the total number of medals won by Australia to the total number of medals won by Great Britain.
Give your ratio in its simplest form.

.....
(2)

(c) In the 2012 Paralympic Games, the total number of gold and silver medals won by Brazil was 35
The ratio of the number of gold medals that Brazil won to the number of silver medals that Brazil won was 3 : 2

How many silver medals were won by Brazil?

.....
(2)

(d) In the 2012 Paralympic Games, the ratio of the total number of medals won by the Ukraine to the total number of medals won by Great Britain was 7 : 10

Great Britain won a total of 120 medals.
What was the total number of medals won by the Ukraine?

.....
(2)

(Total for Question is 7 marks)



Q15.

The water in a fish tank is treated by using 5 millilitres of AquaGuard for every 10 litres of water in the tank.

(a) Write down the ratio of the volume of AquaGuard used to the volume of water in the tank. Give your answer in the form $1 : n$

1 :
(2)

A tank contains 96 litres of water.

(b) Work out the volume of AquaGuard that should be used. Give your answer in millilitres.

..... millilitres
(2)

(Total for Question is 4 marks)



Q16.

Louis makes a model of a plane.

The wingspan of the model is 50 centimetres.
The wingspan of the real plane is 80 metres.

(a) Work out the scale of the model.
Give your answer in the form 1: n

1:
(2)

The length of the real plane is 72 metres.

(b) Work out the length of the model.
Give your answer in centimetres.

..... centimetres
(2)

(Total for question = 4 marks)

Q17.

The diagram shows a hexagon $ABCDEF$

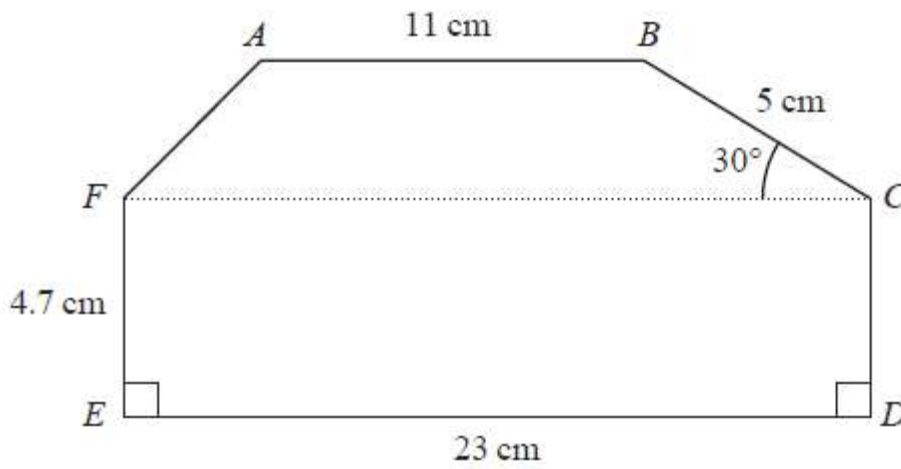


Diagram **NOT** accurately drawn

Angle $BCF = 30^\circ$
 AB , FC and ED are parallel.

Calculate the area of $ABCDEF$
 Show your working clearly.

..... cm^2

(Total for question = 5 marks)

Q18.

The diagram shows triangle PQR .

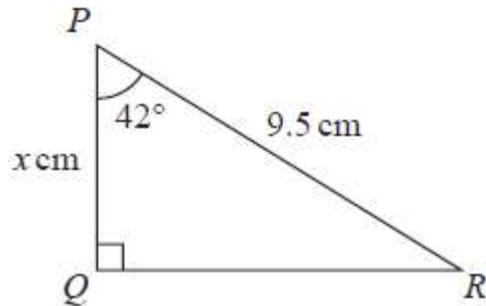


Diagram **NOT**
accurately drawn

Work out the value of x

Give your answer correct to one decimal place.

$x =$

(Total for question = 3 marks)

Q19.

The diagram shows a triangle ABC inside a semicircle.

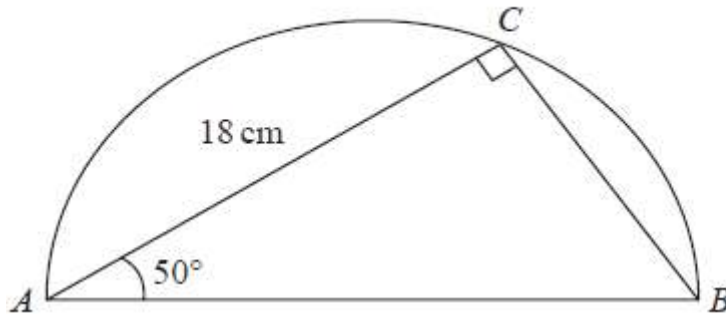


Diagram **NOT**
accurately drawn

A , B and C are points on the semicircle.

AB is the diameter of the semicircle.

Angle $ACB = 90^\circ$

Angle $BAC = 50^\circ$

$AC = 18\text{ cm}$

Work out the perimeter of the semicircle.

Give your answer correct to 2 significant figures.

..... cm

(Total for question = 5 marks)

Q20.

The diagram shows right-angled triangle ABD

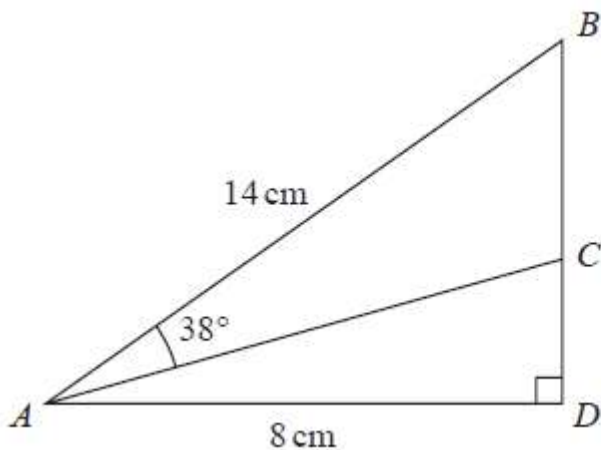


Diagram NOT accurately drawn

$AB = 14\text{ cm}$

$AD = 8\text{ cm}$

C is the point on BD such that angle $BAC = 38^\circ$

Work out the length of CD

Give your answer correct to 3 significant figures.

..... cm

(Total for question = 4 marks)

Q21.

Here is a right-angled triangle.

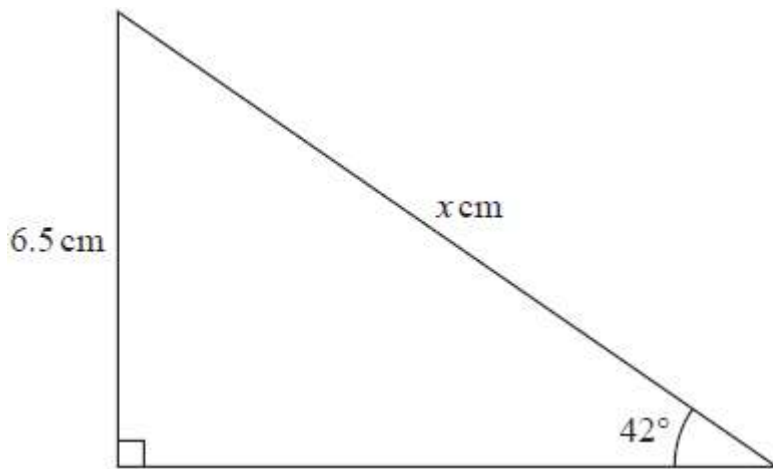


Diagram **NOT**
accurately drawn

Work out the value of x .
Give your answer correct to one decimal place.

$x =$

(Total for question = 3 marks)

Q22.

Here is a right-angled triangle.

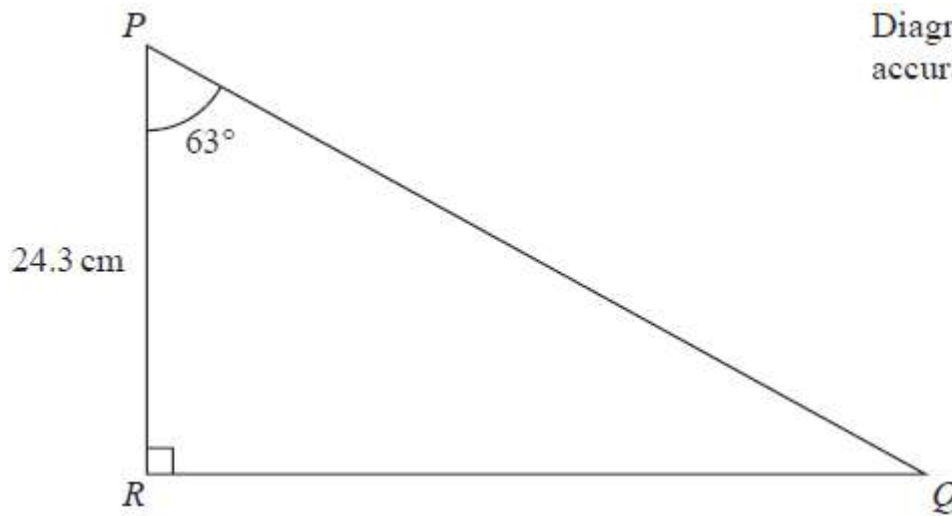


Diagram **NOT**
accurately drawn

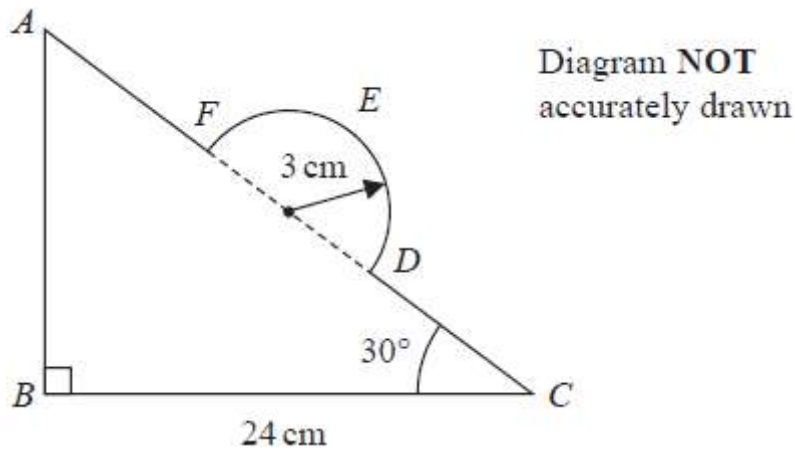
Calculate the length of PQ .
Give your answer correct to 3 significant figures.

..... cm

(Total for question = 3 marks)

Q23.

In the diagram, ABC is a right-angled triangle and DEF is a semicircular arc.



In triangle ABC

$$BC = 24 \text{ cm} \quad \text{angle } ABC = 90^\circ \quad \text{angle } BCA = 30^\circ$$

The points D and F lie on AC so that DF is the diameter of the semicircular arc DEF
The radius of the semicircular arc is 3 cm.

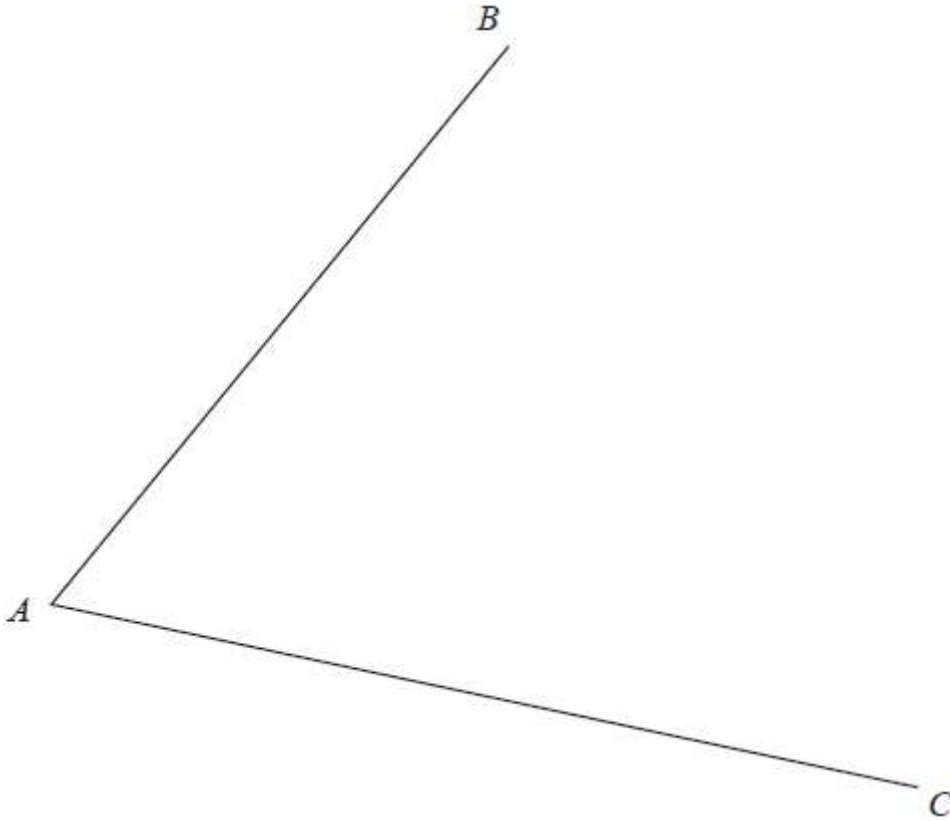
Work out the length of $AFEDC$
Give your answer correct to 2 significant figures.

..... cm

(Total for question = 5 marks)

Q24.

Using ruler and compasses only, construct the bisector of angle BAC
You must show all your construction lines.



(Total for question = 2 marks)



Q25.

ABC is a triangle.

$$AB = 9 \text{ cm}, AC = 5 \text{ cm and } BC = 8 \text{ cm.}$$

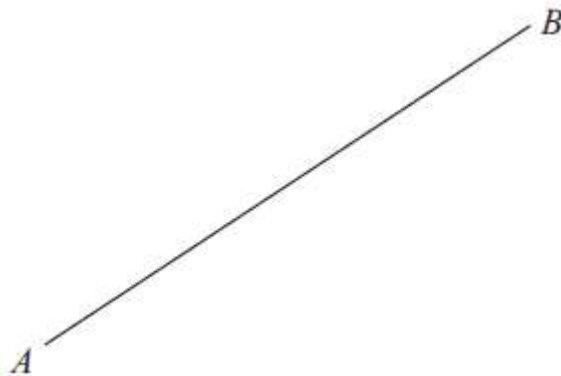
Use ruler and compasses to construct triangle ABC with AB as its base.
You must show all construction lines.
The line AB has been drawn for you.



(Total for question = 2 marks)

Q26.

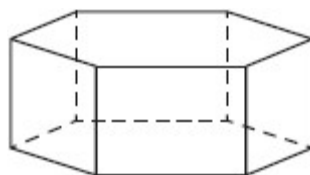
Using ruler and compasses only, construct the perpendicular bisector of the line AB
Show all your construction lines.



(Total for question = 2 marks)

Q27.

The diagram shows a solid prism.



(a) How many vertices has the prism?

.....
(1)

(b) How many faces has the prism?

.....
(1)

(c) Using ruler and compasses only, in the space below construct the equilateral triangle ABC with sides of length 7 cm.

You must show all your construction lines.
Side AB has already been drawn for you.



(2)

(Total for question = 4 marks)

Q28.

Here is a sketch of triangle ABC

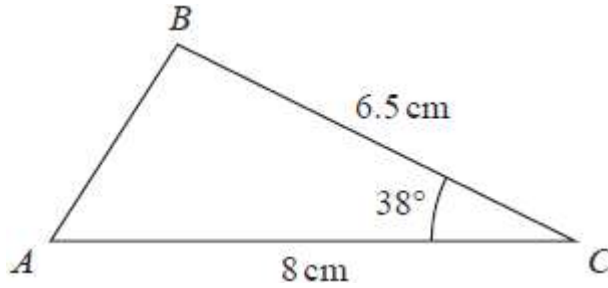


Diagram **NOT**
accurately drawn

$AC = 8 \text{ cm}$ $BC = 6.5 \text{ cm}$ angle $ACB = 38^\circ$

In the space below, make an accurate drawing of triangle ABC
The line AC has been drawn for you.



(Total for question = 2 marks)

Q29.

The diagram shows parts of three regular polygons, **A**, **B** and **C**, meeting at a point.

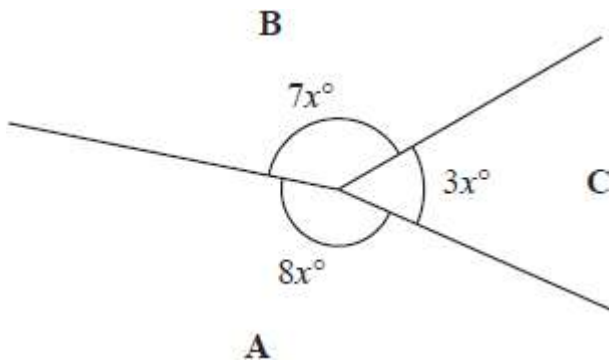


Diagram **NOT** accurately drawn

Polygon **B** has n sides.

Work out the value of n .

$n = \dots\dots\dots$

(Total for question = 4 marks)

Q30.

Here is a quadrilateral.

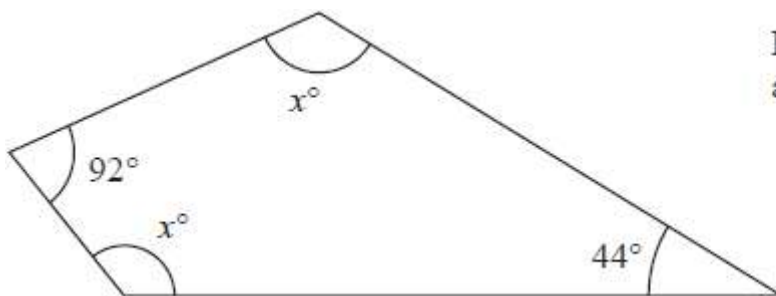


Diagram **NOT** accurately drawn

(i) Work out the value of x

$x = \dots\dots\dots$
(3)

(ii) Give a reason for your answer.

.....
.....
(1)

(Total for question = 4 marks)

Q31.

(a) Show that $\frac{7}{12} + \frac{3}{8} = \frac{23}{24}$

(2)

(b) Show that $1\frac{2}{3} \times 2\frac{1}{15} = 3\frac{4}{9}$

(3)

(Total for question = 5 marks)



Q32.

(a) Show that $\frac{4}{5} + \frac{2}{3} = 1\frac{7}{15}$

(2)

(b) Show that $2\frac{1}{4} \div 3\frac{1}{2} = \frac{9}{14}$

(3)

(Total for Question is 5 marks)



Q33.

(a) Show that $\frac{3}{10} + \frac{2}{15} = \frac{13}{30}$

(2)

(b) Show that $2\frac{5}{8} \div 1\frac{1}{6} = 2\frac{1}{4}$

(3)

(Total for question = 5 marks)



Q34.

(a) Solve $5(4 - x) = 7 - 3x$

Show clear algebraic working.

$x = \dots\dots\dots$

(3)

(b) Factorise fully $16m^3g^3 + 24m^2g^5$

$\dots\dots\dots$

(2)

(c) (i) Factorise $y^2 - 2y - 48$

$\dots\dots\dots$

(2)

(ii) Hence, solve $y^2 - 2y - 48 = 0$

$\dots\dots\dots$

(1)

(Total for question = 8 marks)

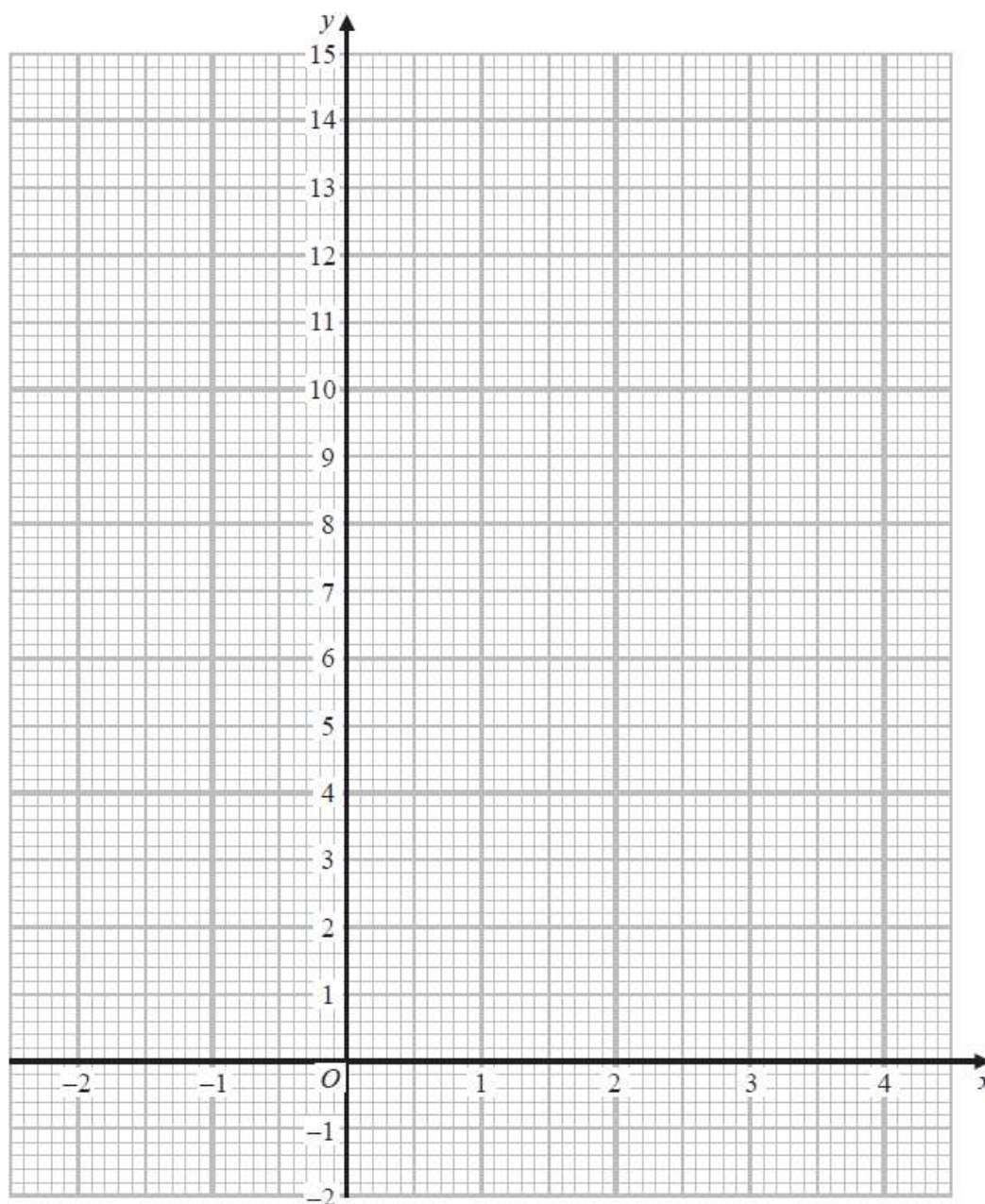
Q35.

(a) Complete the table of values for $y = x^2 - 4x + 3$

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

(2)

(b) On the grid, draw the graph of $y = x^2 - 4x + 3$ for values of x from -2 to 4



(2)

(Total for question = 4 marks)



Q36.

(a) Expand $x(x - 3)$

.....
(1)

(b) Make t the subject of $m = \frac{t + 4}{5}$

.....
(2)

(c) Simplify $a^6 \times a^{10}$

.....
(1)

(d) Simplify $c^{30} \div c^{12}$

.....
(1)

(e) (i) Factorise $y^2 - 10y + 21$

.....
(2)

(ii) Hence, solve $y^2 - 10y + 21 = 0$

.....
(1)

(Total for question = 8 marks)



Q37.

(i) Factorise $x^2 + 9x - 22$

.....
(2)

(ii) Hence, solve $x^2 + 9x - 22 = 0$

.....
(1)

(Total for question = 3 marks)

Q38.

(a) Factorise fully $18c^3d^2 - 21c^2$

.....
(2)

(b) (i) Factorise $y^2 - 3y - 18$

.....
(2)

(ii) Hence, solve $y^2 - 3y - 18 = 0$

.....
(1)

(Total for question = 5 marks)

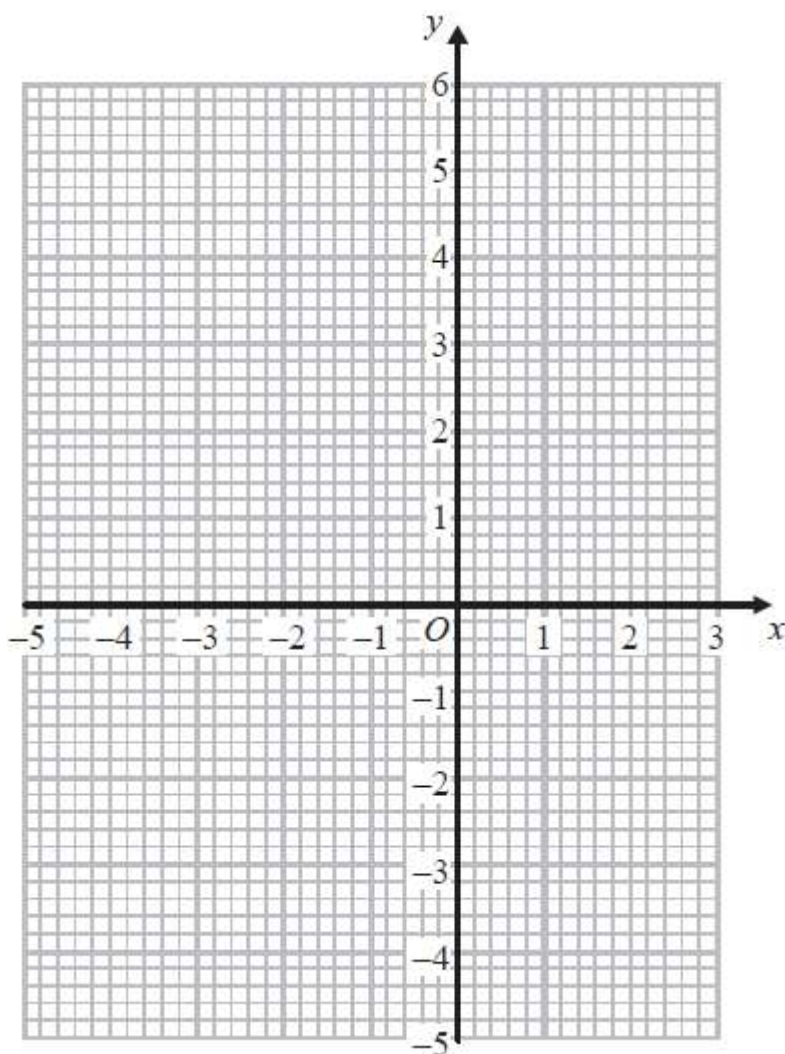
Q39.

(a) Complete the table of values for $y = x^2 + 2x - 3$

x	-4	-3	-2	-1	0	1	2
y		0	-3	-4			5

(2)

(b) On the grid, draw the graph of $y = x^2 + 2x - 3$ for values of x from -4 to 2



(2)

(Total for Question is 4 marks)



Q40.

(a) Solve the inequality $5x - 7 \leq 2$

.....
(2)

(b) (i) Factorise $y^2 - 2y - 35$

.....
(2)

(ii) Hence, solve $y^2 - 2y - 35 = 0$

.....
(1)

(Total for question = 5 marks)



Q41.

(a) Simplify $(3x^2y)^0$

.....
(1)

(b) (i) Factorise $x^2 - 5x - 36$

.....
(2)

(ii) Hence solve $x^2 - 5x - 36 = 0$

.....
(1)

(Total for question = 4 marks)



Q42.

(a) Expand and simplify $3x(2x + 3) - x(3x + 5)$

.....
(2)

(b) Make t the subject of the formula $p = at - d$

.....
(2)

Given that $\frac{w^5 \times w^n}{w^3} = w^{10}$

(c) work out the value of n .

$n =$
(2)

(Total for question = 6 marks)



Q43.

(a) Simplify $x^4 \times x^5$

.....
(1)

(b) Simplify $(4y^2)^3$

.....
(2)

(c) Factorise $n^2 - 7n + 12$

.....
(2)

(Total for question = 5 marks)



Q44.

(a) Solve $\frac{2x+5}{6} = 2x-5$

Show clear algebraic working.

$x = \dots\dots\dots$
(3)

(b) Simplify $h^{15} \div h^3$

$\dots\dots\dots$
(1)

(c) Simplify fully $(2g^3k^5)^4$

$\dots\dots\dots$
(2)

(d) Given that $\frac{y^5 \times y^n}{y^7} = y^{12}$

work out the value of n

$n = \dots\dots\dots$
(2)

(Total for question = 8 marks)



Q45.

(a) Simplify $(p^3)^5$

.....
(1)

(b) Expand and simplify $2n(4n + 3) + n(n - 4)$

.....
(2)

(c) Solve $\frac{2x + 5}{3} = 4 - x$

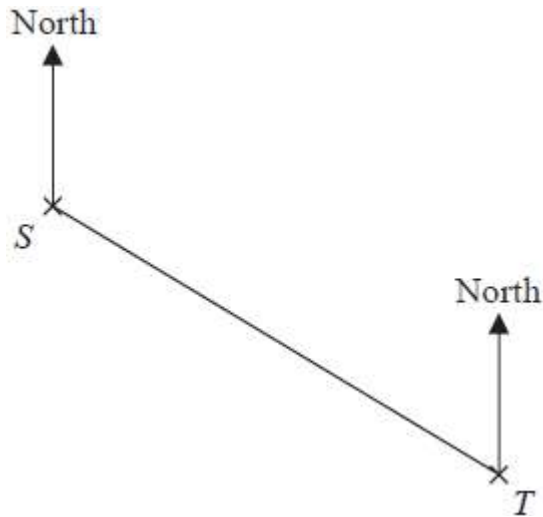
Show clear algebraic working.

$x =$
(3)

(Total for question = 6 marks)

Q46.

The accurate scale drawing shows the positions of two lighthouses, *S* and *T*



The scale of the drawing is 1 cm to 2 km

(a) Find, by measuring, the bearing of lighthouse *T* from lighthouse *S*

..... °
(1)

A boat is on a bearing of 084° from *S*
The boat is 13 km from *T*

(b) On the diagram, mark with a cross (X) the position of the boat.

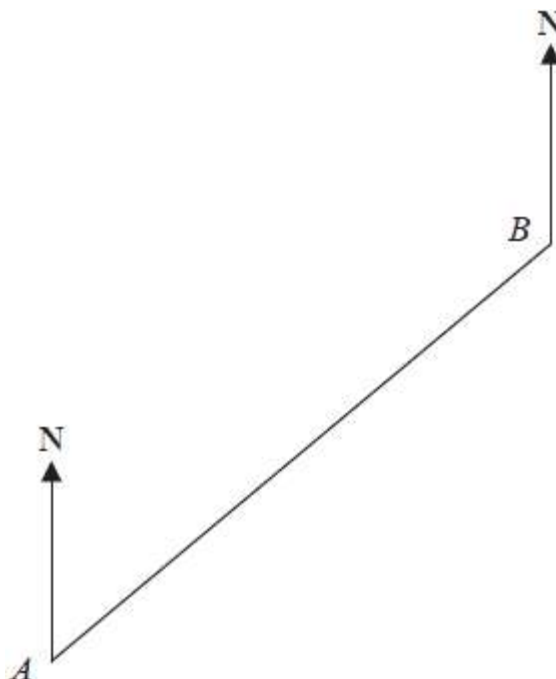
Label the cross *B*

(3)

(Total for question = 4 marks)

Q47.

The scale drawing shows the positions of two boats, *A* and *B*



Scale: 1 cm represents 3 km

(a) Work out the actual distance, in kilometres, between *A* and *B*

..... km
(2)

Boat *C* is on a bearing of 110° from *B*

Boat *C* is 24 km from *B*

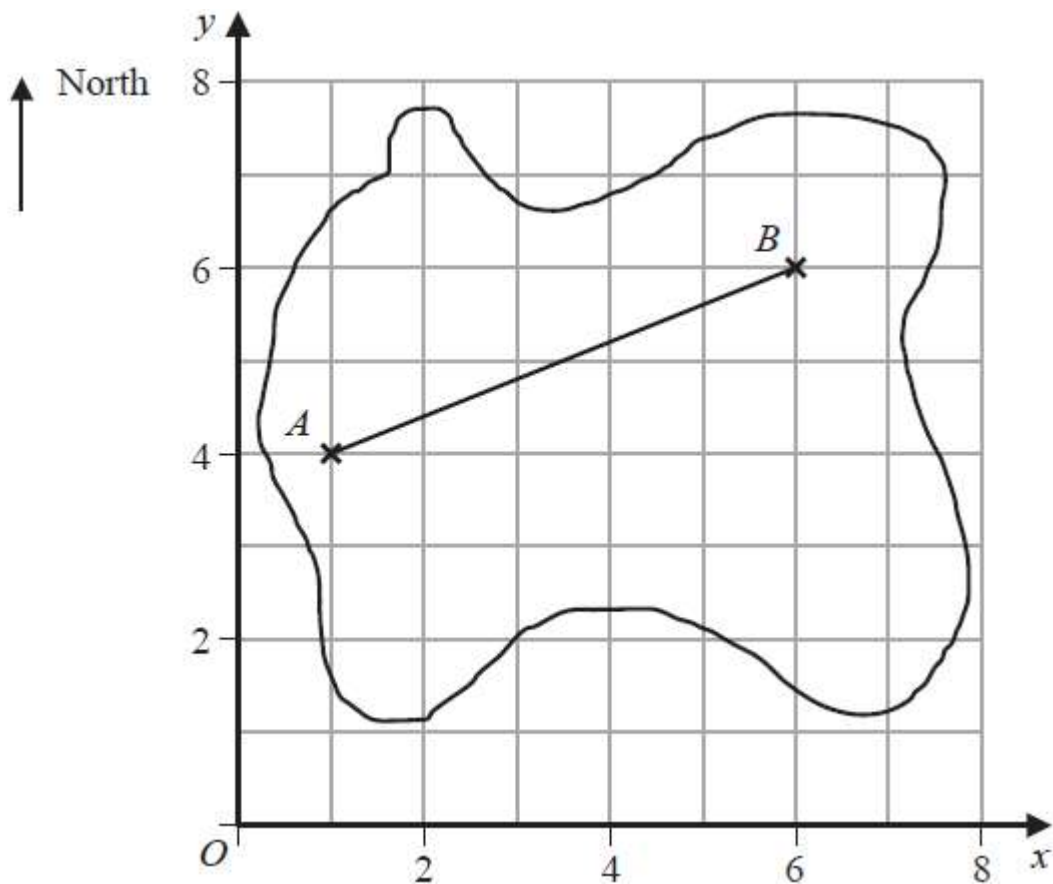
(b) On the scale drawing, mark with a cross (\times) the position of boat *C*

(3)

(Total for question = 5 marks)

Q48.

The accurate scale diagram shows the map of an island drawn on a centimetre grid.



The position of Aaron's house is *A*.
The position of Bharat's house is *B*.

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

(..... ,)
(1)

(b) By measurement, find the bearing of *A* from *B*.

.....°
(2)

(c) Measure the length of the line *AB*.

Give your answer in centimetres correct to one decimal place.

..... cm



(1)

Aaron cycled along a straight path from his house to Bharat's house.
The scale of the map is 1 cm represents 5 km.

(d) Work out the distance, in kilometres, that Aaron cycled.

..... km
(1)

Aaron left his house at 10 45 am and arrived at Bharat's house at 1 05 pm.

(e) How long did Aaron's cycle ride take him?

Give your answer in hours and minutes.

..... hours minutes
(2)

(Total for question = 7 marks)

Q49.

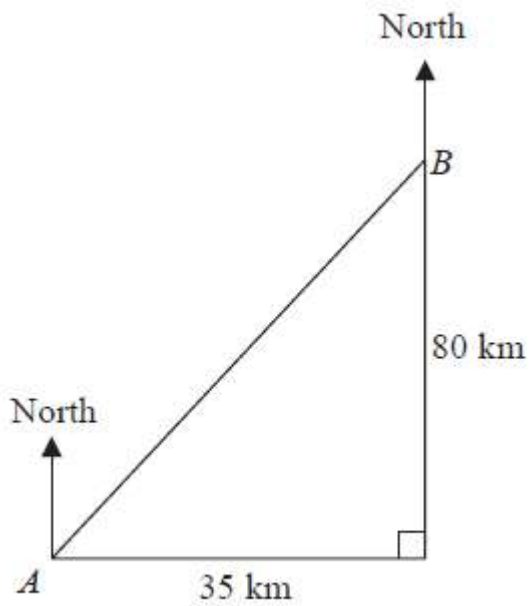


Diagram **NOT**
accurately drawn

Town *B* is 35 km east and 80 km north of town *A*.

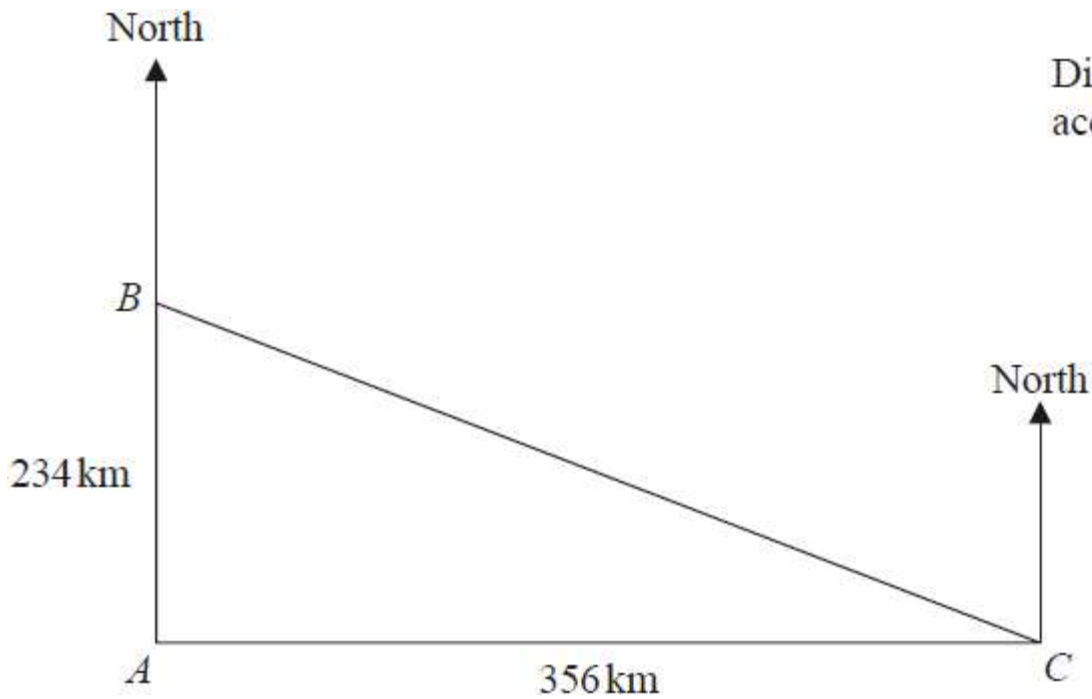
Work out the bearing of town *A* from town *B*.
Give your answer correct to the nearest degree.

.....°

(Total for question = 4 marks)

Q50.

The diagram shows the positions of three ships A , B and C .



B is 234 km due north of A .

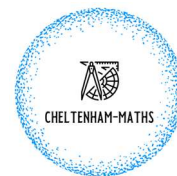
C is 356 km due east of A .

Work out the bearing of B from C .

Give your answer correct to the nearest degree.

..... °

(Total for question = 4 marks)



Q51.

Here are the first five terms of a number sequence.

7 11 15 19 23

(a) Find an expression, in terms of n , for the n th term of this sequence.

.....
(2)

The n th term of a different number sequence is given by $80 - 2n$

(b) Write down the first 3 terms of this sequence.

..... , ,
(2)

Yuen says there are no numbers that are in both of the sequences.
Yuen is correct.

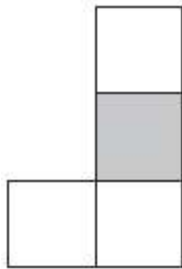
(c) Explain why.

.....
.....
(1)

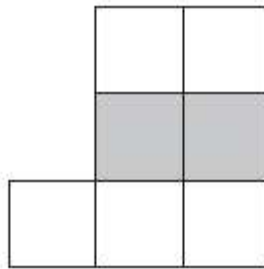
(Total for question = 5 marks)

Q52.

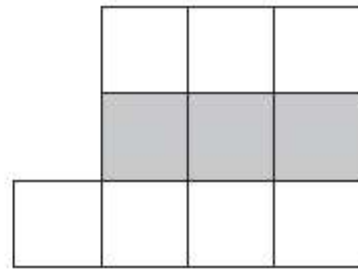
Here is a sequence of patterns made from white centimetre squares and grey centimetre squares.



Pattern number 1



Pattern number 2



Pattern number 3

This rule can be used to find the total number of centimetre squares in each pattern.

Multiply the Pattern number by 3 and then add 1

- (a) Work out the total number of centimetre squares in Pattern number 6

.....
(1)

- (b) Work out the number of white centimetre squares in Pattern number 20

.....
(1)

A pattern in this sequence has a total of 88 centimetre squares.

- (c) Work out the Pattern number of this pattern.

.....
(2)

(Total for Question is 4 marks)



Q53.

Here are the first five terms of a number sequence.

7 10 13 16 19

(a) Write down the next term of the sequence.

.....
(1)

(b) Explain how you found your answer.

.....
(1)

(c) Find the 11th term of the sequence

.....
(1)

(d) Explain why 60 cannot be a term of the sequence.

.....
.....
(1)

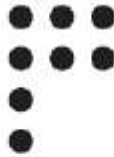
(Total for question = 4 marks)

Q54.

Here is a sequence of patterns made from dots.



Pattern number 1



Pattern number 2



Pattern number 3

(a) In the space below, draw Pattern number 4.

(1)

This rule can be used to find the number of dots in a pattern of the sequence.

Multiply the Pattern number by 3 and then add 2

(b) Work out the number of dots in Pattern number 7.

.....
(2)

A pattern has exactly 41 dots.

(c) Work out the Pattern number.

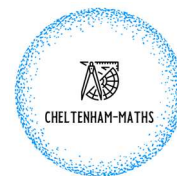
.....
(2)

T is the number of dots in Pattern number n .

(d) Write down a formula for T in terms of n .

.....
(3)

(Total for question = 8 marks)



Q55.

Here are the first five terms of a number sequence.

17 21 25 29 33

(a) Write down the next two terms of the sequence.

..... ,

(2)

(b) Explain how you found your terms.

.....

(1)

(c) Work out the 12th term of the sequence.

.....

(1)

(d) Explain why 70 is not a term of this sequence.

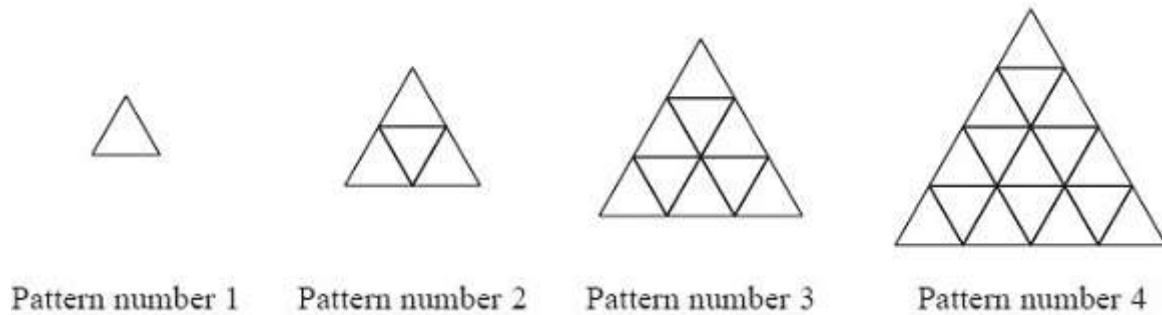
.....

(1)

(Total for question = 5 marks)

Q56.

Here is a sequence of patterns made from small triangular tiles.



The table shows the number of tiles used to make each pattern.

Pattern number	1	2	3	4
Number of tiles	1	4	9	16

(a) How many tiles are used to make

(i) Pattern number 5

.....

(ii) Pattern number 10

.....

(2)

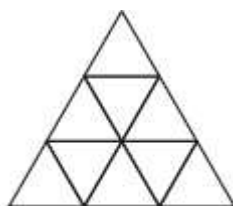
A pattern in the sequence is made from 144 tiles.

(b) Find the Pattern number for this pattern.

.....

(1)

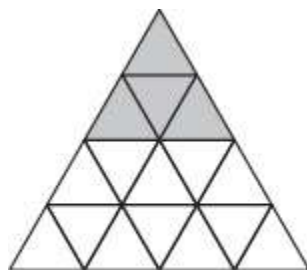
(c) On the diagram below, shade $\frac{2}{3}$ of Pattern number 3.



Pattern number 3

(1)

Some tiles in Pattern number 4 are shaded.



Pattern number 4

(d) What fraction of Pattern number 4 is shaded?

Give your fraction in its simplest form.

.....
(2)

(Total for Question is 6 marks)

Q57.

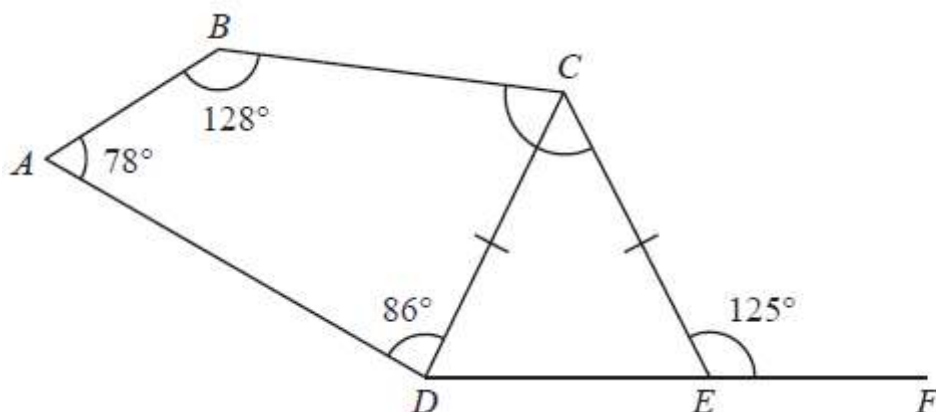


Diagram **NOT** accurately drawn

ABCD is a quadrilateral.
CDE is an isosceles triangle with $CD = CE$
DEF is a straight line.

Work out the size of angle *BCE*
 Give a reason for each stage of your working.

angle *BCE* =°

(Total for question = 5 marks)

Q58.

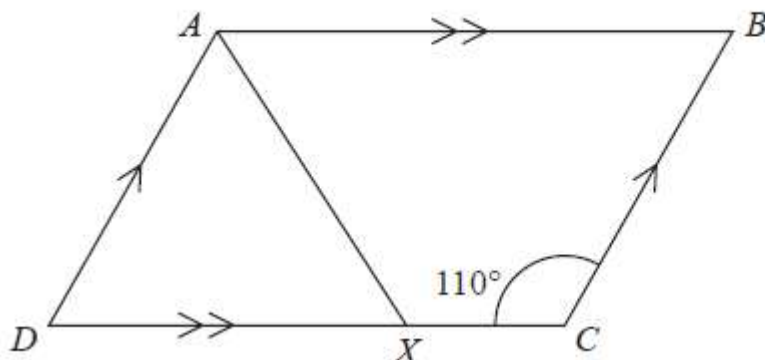


Diagram NOT accurately drawn

ABCD is a parallelogram.

Angle *DCB* = 110°

X is the point on *DC* such that *AX* bisects the angle *DAB*.

Calculate the size of angle *AXC*.

.....°

(Total for question = 4 marks)

Q59.

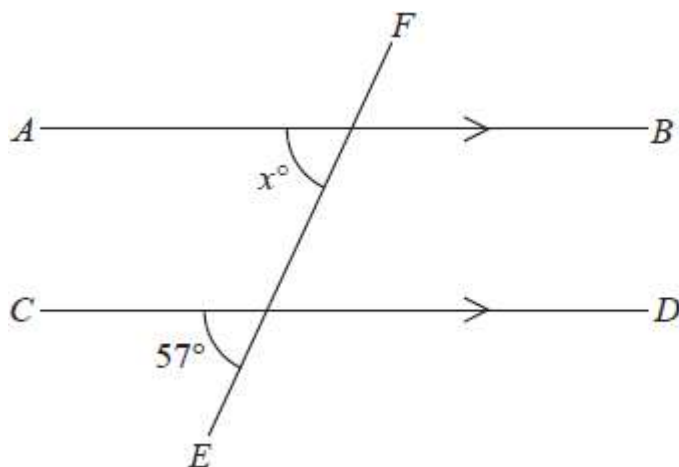


Diagram **NOT**
accurately drawn

AB is parallel to *CD*
EF is a straight line.

(a) (i) Find the value of x

$x = \dots\dots\dots$

(ii) Give a reason for your answer.

.....
.....

(2)

Here is a pentagon.

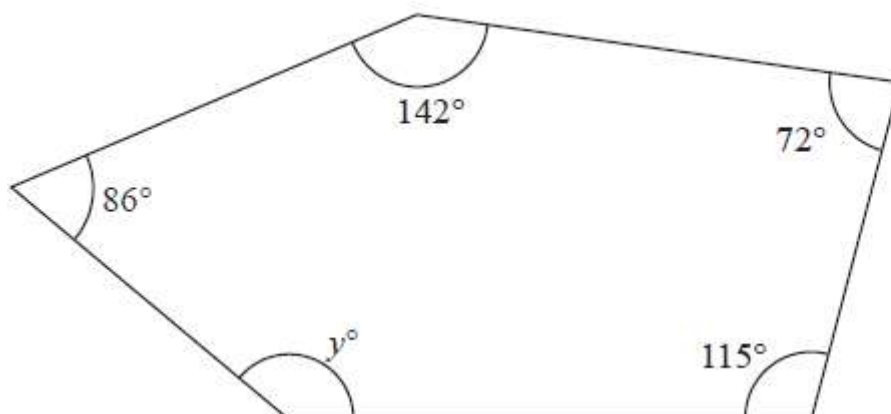


Diagram NOT accurately drawn

(b) Work out the value of y .

$y = \dots\dots\dots$

(3)

(Total for question = 5 marks)

Q60.

Each interior angle of a regular polygon is 156°

Work out the number of sides of the polygon.

.....

(Total for question = 3 marks)



Q61.

1 euro = 120 yen
£1 = 1.2 euros

(a) Change 250 euros to yen.

.....yen
(2)

(b) Change 9000 yen to euros.

.....euros
(2)

(c) Change £50 to yen.

.....yen
(2)

(Total for question = 6 marks)

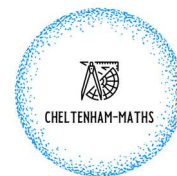
Q62.

2 cupcakes and 5 doughnuts cost \$4.50
3 cupcakes cost \$2.25

Work out the cost of 1 doughnut.

\$.....

(Total for question = 4 marks)



Q63.

1 euro = 1.40 Canadian dollars

(a) Alain changes 450 euros into Canadian dollars.
How many Canadian dollars should he receive?

.....Canadian dollars
(2)

(b) Isabella changes 840 Canadian dollars into euros.
How many euros should she receive?

.....euros
(2)

1 euro = 100 cents

(c) How many cents is 1 Canadian dollar worth?

.....cents
(2)

(Total for question = 6 marks)

Q64.

Aabir has some boxes and some crates.
Each box has the same weight.
Each crate has the same weight.

The total weight of 7 boxes and 2 crates is 27.3 kg
The total weight of 4 boxes and 2 crates is 16.8 kg

Work out the weight of one crate.

..... kg

(Total for question = 4 marks)



Q65.

120 children go on an activity holiday.
The ratio of the number of girls to the number of boys is 3 : 5

On Sunday, all the children either go sailing or go climbing.

$\frac{16}{25}$ of the boys go climbing.

Twice as many girls go sailing as go climbing.

Work out how many children go sailing on Sunday.

.....

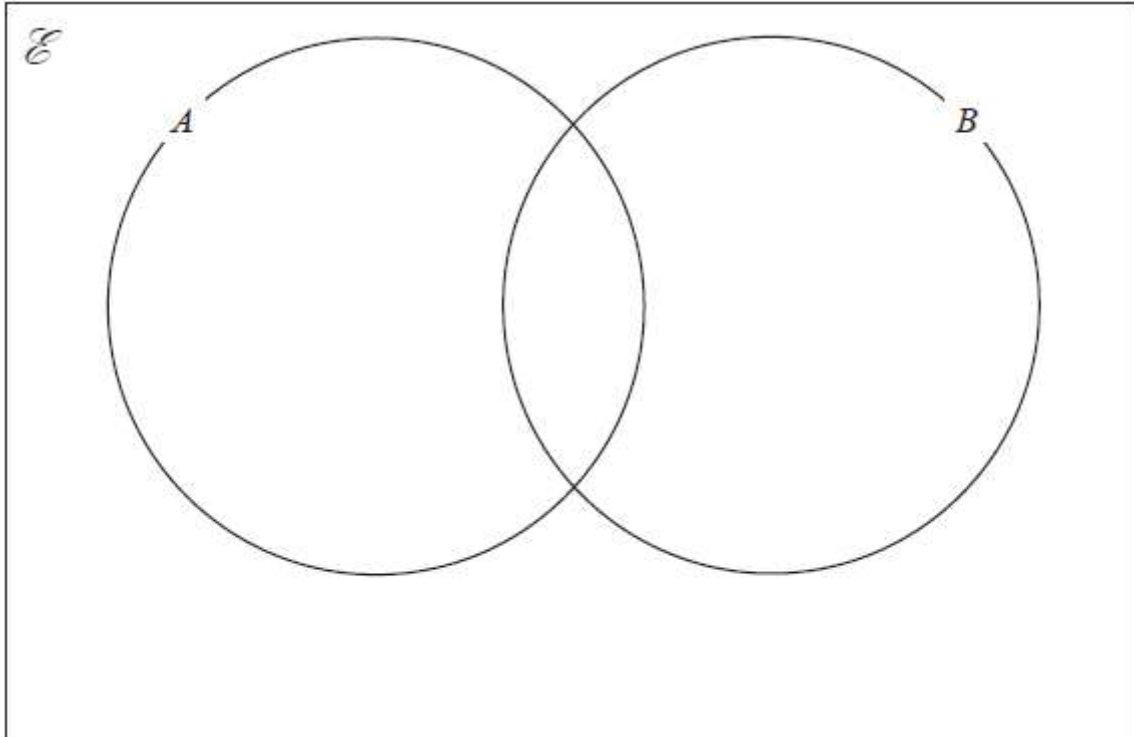
(Total for question = 6 marks)

Q66.

$\mathcal{E} = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15$

$A =$ even numbers

$B =$ multiples of 3



Complete the Venn diagram for the sets \mathcal{E} , A and B .

(Total for question = 3 marks)

Q67.

30 children were asked whether they have a cat (C) or a dog (D)

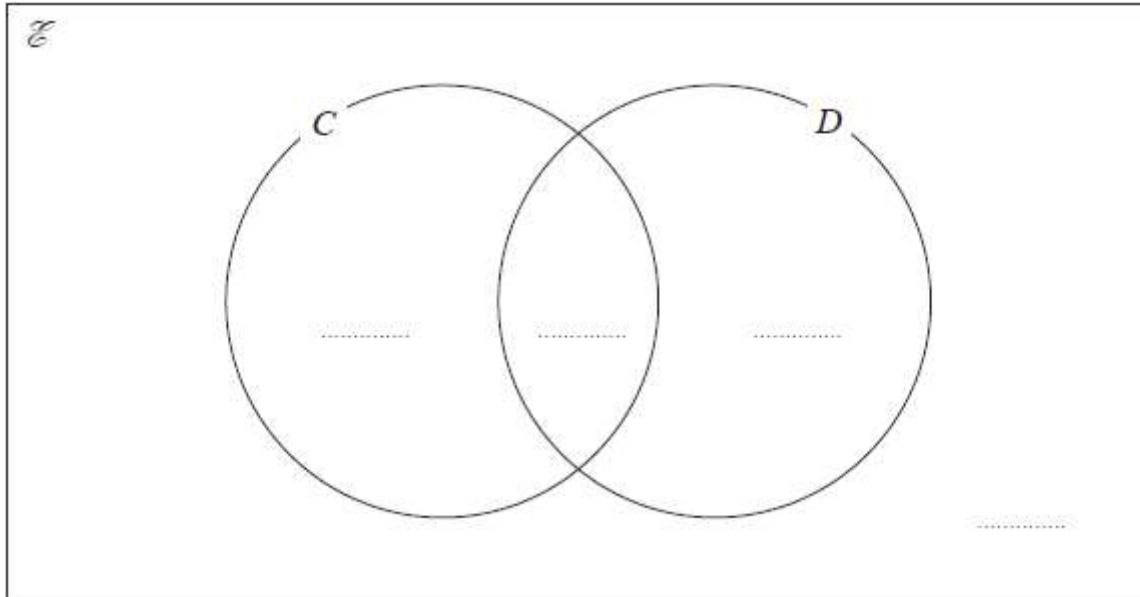
Of the 30 children

5 have both a cat and a dog

13 have a dog

11 have **only** a cat

(a) Complete the Venn diagram.



(3)

One of the children is picked at random.

(b) Find the probability that this child

(i) has a dog,

.....

(1)

(ii) does not have a dog and does not have a cat.

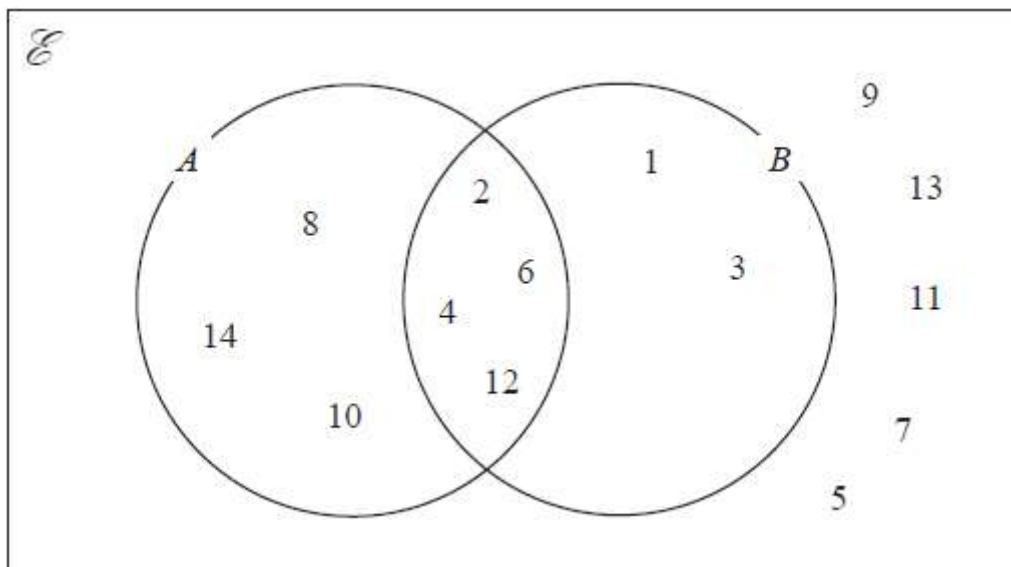
.....

(1)

(Total for question = 5 marks)

Q68.

The numbers from 1 to 14 are shown in the Venn diagram.



(a) List the members of the set $A \cap B$

.....
(1)

(b) List the members of the set $B \setminus A$;

.....
(1)

A number is picked at random from the numbers in the Venn diagram.

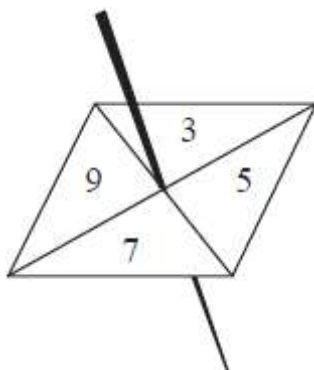
(c) Find the probability that this number is in set A but is **not** in set B.

.....
(2)

(Total for question = 4 marks)

Q69.

Rayna has a fair 4-sided spinner.
The spinner can land on 3, 5, 7 or 9



Rayna spins the spinner 20 times.
She records the score for each spin.
Here are her scores.

3 9 5 7 9 5 3 3 5 9
9 9 7 5 9 7 5 9 3 7

(a) Complete the frequency table for these results.

Score	Tally	Frequency
3		
5		
7		
9		

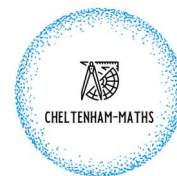
(2)

(b) Write down the mode of her scores.

.....
(1)

(c) Find the range of her scores.

.....



(1)

Rayna says that 3, 5, 7 and 9 are all prime numbers.

(d) Explain why Rayna is wrong.

.....

.....

(1)

Rayna now spins her spinner twice.
She adds the two numbers together to get the total.

(e) Complete the table to show the total for each possible outcome.
Five of the totals have been done for you.

		1st spin			
		3	5	7	9
2nd spin	3	6		10	
	5		10	12	
	7	10			
	9				

(2)

Rayna spins the spinner twice.

(f) (i) Write down the probability that she will get a total of 10

.....

(ii) Write down the probability that she will get a total greater than 12

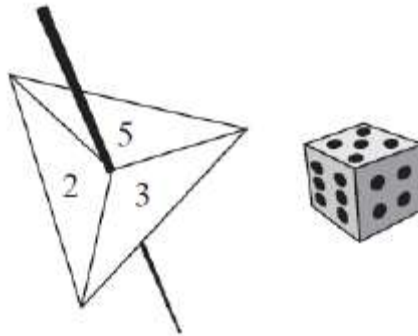
.....

(3)

(Total for question = 10 marks)

Q70.

Paul has a fair 3-sided spinner and a fair 6-sided dice.



The spinner can land on 2, 3 or 5.

Paul spins the spinner once and throws the dice once.

(a) Complete the table to show all the possible outcomes.

Four outcomes have been done for you.

		Dice					
		1	2	3	4	5	6
Spinner	2	2,1					2,6
	3			3,3	3,4		
	5						

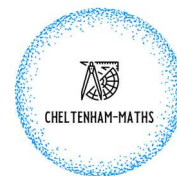
(2)

Paul spins the spinner once and throws the dice once.

(b) Find the probability that the number the spinner lands on is greater than the number shown on the dice.

.....
(2)

(Total for question = 4 marks)



Q71.

The table shows information about the number of eggs in each of 40 birds' nests.

Number of eggs	Frequency
0	5
1	14
2	11
3	6
4	3
5	1

(a) Write down the mode.

.....
(1)

(b) Find the median.

.....
(2)

(c) Work out the total number of eggs.

.....
(2)

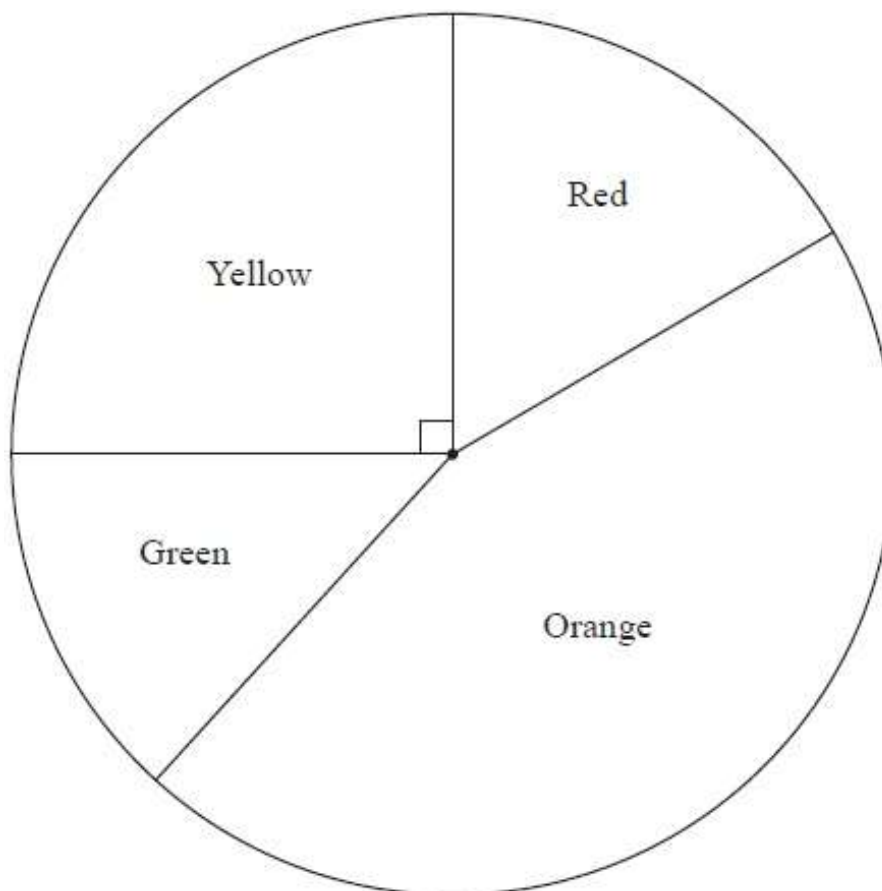
One of these nests is chosen at random.

(d) Find the probability that there are more than 2 eggs in the nest.

.....
(2)

(Total for question = 7 marks)

Q72.



A jar contains 60 sweets.

The sweets are red or orange or green or yellow.

The number of sweets of each colour in the jar was used to draw the pie chart.

The pie chart is accurately drawn.

(a) Which colour sweet is there most of in the jar?

.....
(1)

(b) Measure the size of the angle on the pie chart for green sweets.

.....°
(1)

The angle on the pie chart for yellow sweets is 90°



(c) How many of the 60 sweets in the jar are yellow?

.....
(2)

10 of the 60 sweets in the jar are red.

Billy takes at random a sweet from the jar.

(d) What is the probability that he takes a red sweet?

.....
(1)

(Total for Question is 5 marks)



Q73.

The table shows information about the lengths of time, in minutes, 120 customers spent in a supermarket.

Length of time (L minutes)	Frequency
$20 < L \leq 30$	6
$30 < L \leq 40$	26
$40 < L \leq 50$	31
$50 < L \leq 60$	40
$60 < L \leq 70$	17

(a) Write down the modal class.

.....
(1)

(b) Work out an estimate for the mean length of time spent by the 120 customers in the supermarket.

..... minutes
(4)

(Total for question = 5 marks)