

Practice Paper

Edexcel Linear Specification

Foundation Tier

March 2013



This paper is produced as a best guess for the non-calculator paper.

We offer this paper as a service, but make no great claims as to its accuracy.

Time: 1 hour 45 minutes

Marks: 100

Advice

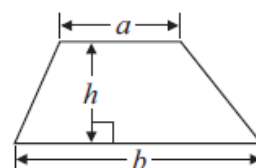
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

GCSE Mathematics 1MA0

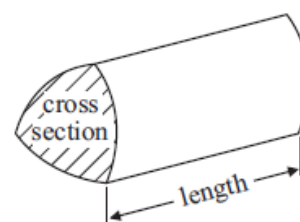
Formulae: Foundation Tier

**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 $= \text{area of cross section} \times \text{length}$



Question 1

- (a) Write in figures the number forty six thousand and nine.

.....

Answer (1 mark)

- (b) Write in figures a number that is between 2000 and 3000

.....

Answer (1 mark)

Question 2

Here are two readings from a gas meter.

0	1	9	6	2
---	---	---	---	---

January

0	2	1	5	9
---	---	---	---	---

April

The difference in the meter readings gives the number of units of gas used.

- (a) Work out the number of units of gas used.

.....
(1 mark)

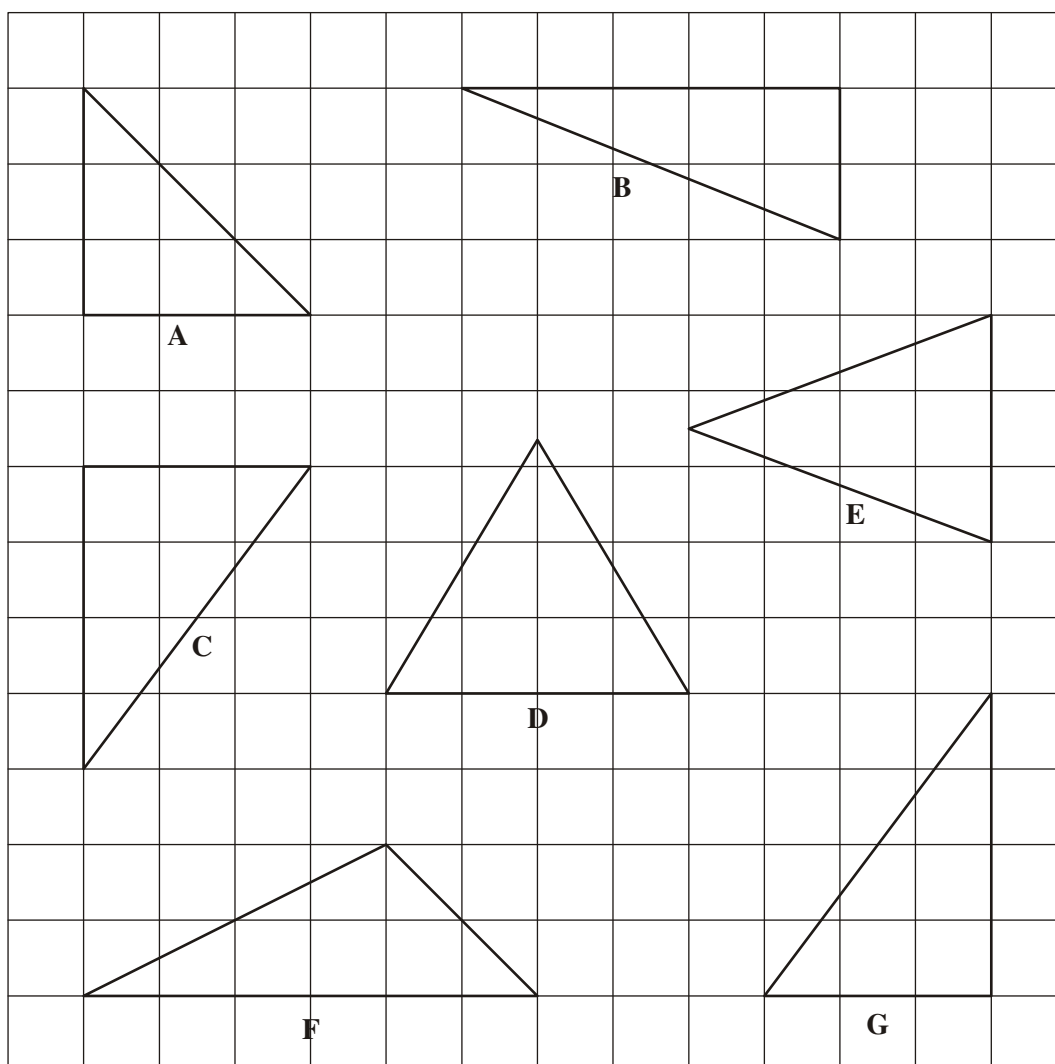
The cost of each unit of gas is 21p.

- (b) Work out the cost of the gas used between January and April.
Give your answer in pounds (£).

.....
(3 marks)

Question 3

Here are 7 triangles.



(a) Write down the letter of the triangle that is

(i) equilateral,

.....

(ii) both isosceles **and** right-angled.

.....

(2)

(b) Write down the letters of the pair of congruent triangles.

..... and.....

(1)

(Total 3 marks)

Question 4

Samir wrote down the temperatures in 6 different cities at midnight one day.

City	Temperature
Manchester	-1 °C
Edinburgh	-6 °C
London	3 °C
Aberdeen	-11 °C
Birmingham	2 °C
Glasgow	-8 °C

(a) Write down

(i) the **highest** temperature,

.....°C

(ii) the **lowest** temperature.

.....°C
(2)

(b) Work out the difference in the temperatures between

(i) Manchester and Birmingham,

.....°C

(ii) Edinburgh and Glasgow.

.....°C
(2)

At 10 a.m. the next morning, the temperature in Glasgow had risen by 5 °C.

(c) Work out the temperature in Glasgow at 10 a.m. the next morning.

.....°C
(1)

(Total 5 marks)

Question 5

The table shows the distances, in miles, between 4 cities.

London			
74	Portsmouth		
39	58	Reading	
97	41	57	Salisbury

(a) Write down the distance between London and Salisbury.

..... miles
(1)

(b) Which two cities are the shortest distance apart?

..... and
(1)

Nazim drives from Portsmouth to Salisbury.
He then drives from Salisbury to Reading.
Finally he drives from Reading to Portsmouth.

(c) Work out the total distance Nazim drives.

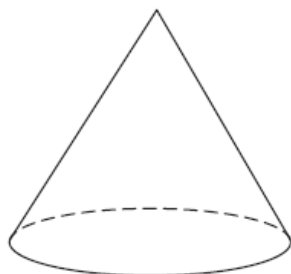
..... miles
(3)

(Total 5 marks)

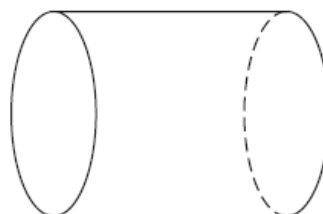
Question 6

Write down the name of each of these two 3-D shapes.

(i)



(ii)



(i)

(ii)

(Total 2 marks)

Question 7

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.

..... p

..... p

..... p
(1)

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?

..... p

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

..... p
(2)

(Total 3 marks)

Question 8

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

Emma takes at random a chocolate from the box.

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

.....
(1)

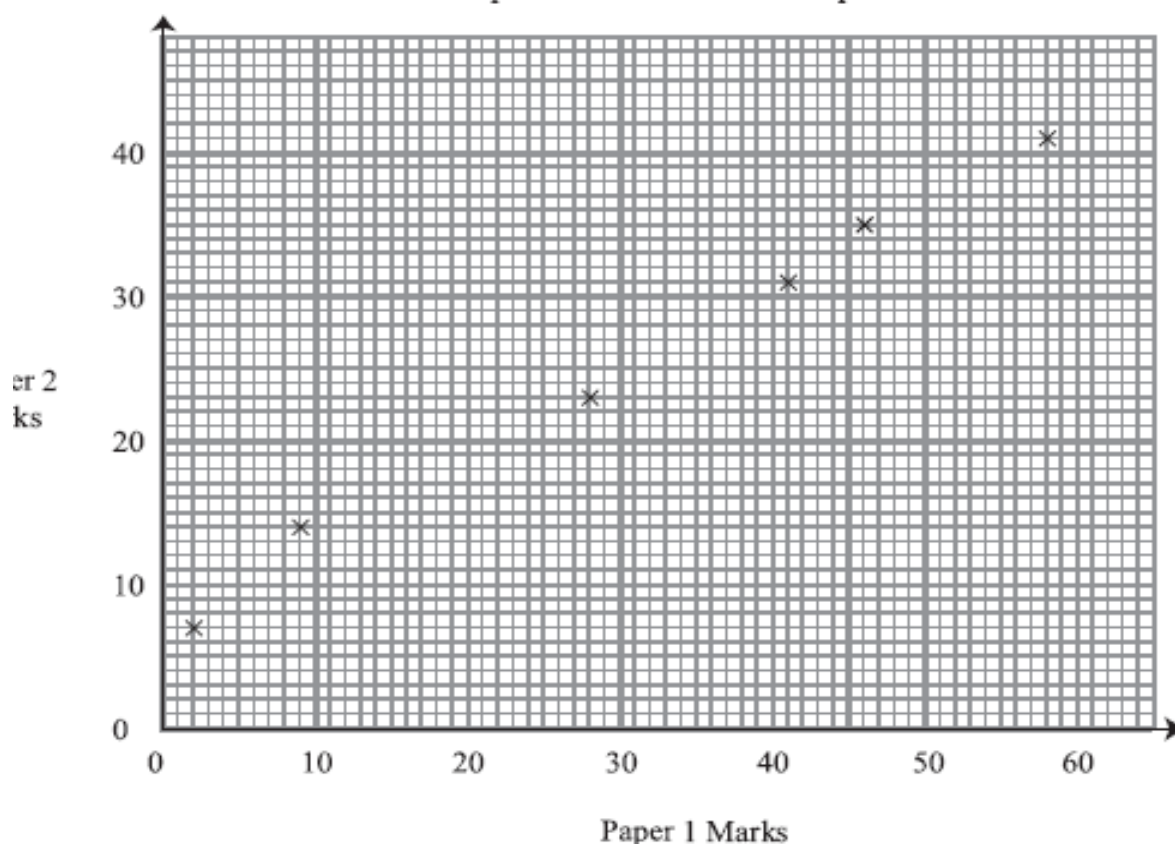
- (b) What is the probability that Emma takes a dark chocolate?

.....
(2)

.....
(Total 3 marks)

Question 9

- The scatter graph shows some information about the marks of six students. It shows each student's mark on Paper 1 and their mark on Paper 2.



The table shows the marks on Paper 1 and Paper 2 for two more students, A and B.

	Student A	Student B
Paper 1 mark	20	50
Paper 2 mark	20	35

- (a) On the scatter graph, plot the information from the table. (1)
- (b) Describe the correlation between the marks on Paper 1 and the marks on Paper 2.

..... (1)

Another student has a mark of 30 on Paper 2.

- (c) Estimate the mark on Paper 1 for this student. (2)
-

(Total 4 marks)

Question 10

(a) Simplify $a + a + a + a$

.....
(1)

(b) Simplify $3 \times b \times 4$

.....
(1)

(c) Simplify completely $4a + 5b - 2a + b$

.....
(2)

Question 11

(a) Use your calculator to work out $\frac{4.7}{9.4 - 3.5}$

Write down all the figures on your calculator display.

.....
(2)

Question 12

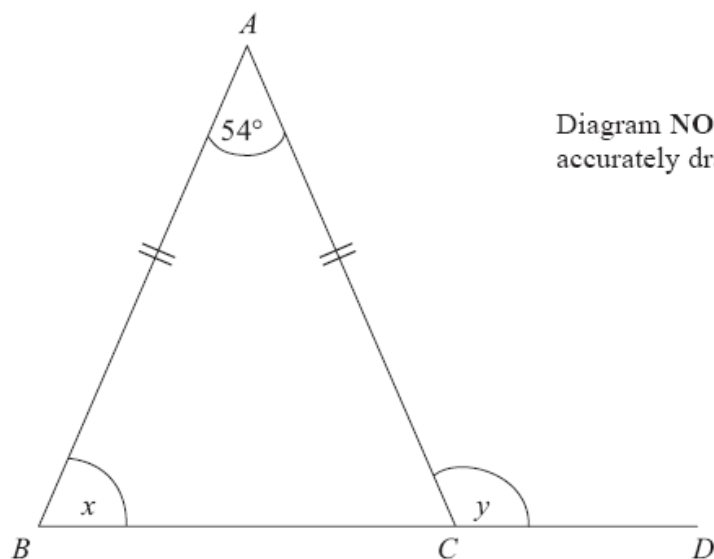


Diagram NOT
accurately drawn

ABC is an isosceles triangle.

BCD is a straight line.

$AB = AC$.

Angle $A = 54^\circ$.

- (a) (i) Work out the size of the angle marked x .

.....^o

- (ii) Give a reason for your answer.

.....

.....
(3)

- (b) Work out the size of the angle marked y .

.....^o
(1)

(Total 4 marks)

Question 13

Joanna made a list of the ages of the children in a playgroup.

4 3 1 4 2 4 4 2 1 2

(a) Find the median age of the children in the play group.

.....
(2)

(b) Find the range of the ages of the children in the playgroup.

.....
(1)

(Total 3 marks)

Question 14

The stem and leaf diagram shows information about the areas, in cm^2 , of 31 photographs.

0	8 8 9
1	1 1 3 4 4 8 9
2	0 3 5 5 7 8 9
3	2 2 3 3 5 8 8 8
4	1 1 3 3 5 8

Key	4 1	represents 41 cm^2
-----	-------	-----------------------------

- (a) Write down the number of photographs that have an area of 38 cm^2 .

.....
(1)

- (b) Find the median area.

..... cm^2
(2)
(Total 3 marks)

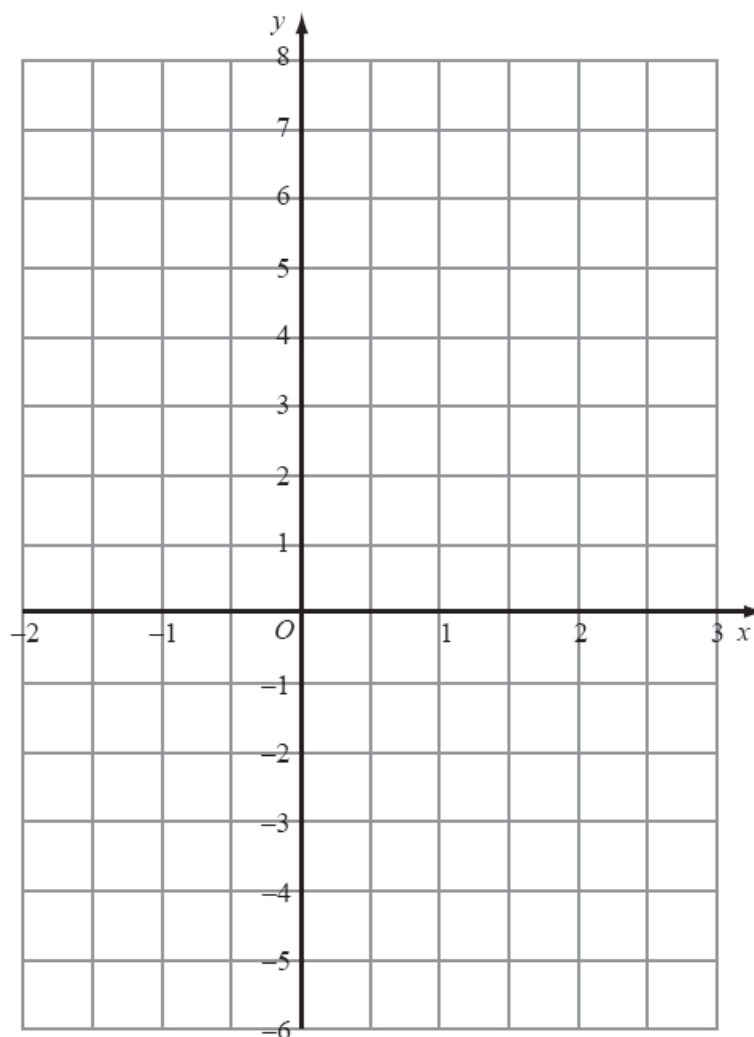
Question 15

- (a) Complete the table of values for $y = 2x + 1$

x	-2	-1	0	1	2	3
y		-1	1			

(2)

- (b) On the grid, draw the graph of $y = 2x + 1$



(2)

- (c) Use your graph to find

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

$y = \dots\dots\dots$

- (ii) the value of x when $y = 6$

$x = \dots\dots\dots$

(2)

(Total 6 marks)

Question 16

Here are the ingredients needed to make 1000 ml of custard.

Custard
makes 1000 ml
800 ml of milk
6 large egg yolks
100 g sugar
4 teaspoons of cornflour

- (a) Work out the amount of sugar needed to make 2500 ml of custard.

.....g
(2)

- (b) Work out the amount of milk needed to make 1500 ml of custard.

.....ml
(2)

(Total 4 marks)

Question 17

20 students scored goals for the school hockey team last month.
The table gives information about the number of goals they scored.

Goals scored	Number of students	
1	9	
2	3	
3	5	
4	3	

Work out the mean number of goals scored.

.....
(Total 3 marks)

Question 18

- . The diagram shows the position of Blackport and the position of Clancy Bay.



The bearing of a ship from Blackport is 140° .
The bearing of the ship from Clancy Bay is 200° .

In the space above, draw an accurate diagram to show the position of the ship.
Mark this position with a cross \times . Label it *P*.

0 1 2 3 4 5 6 7 8 9 10

Total 4 marks

Question 19

Colin goes to Switzerland.
The exchange rate is £1 = 2.30 francs.

He changes £400 into francs.

(a) How many francs should he get?

..... francs
(2)

In Switzerland, Colin buys a hat.
The cost of the hat is 46 francs.

*

(b) Work out the cost of the hat in pounds.

£
(2)

(Total 4 marks)

Question 20

(a) Solve $x - 6 = 11$

$x = \dots\dots\dots$
(1)

(b) Solve $4y + 2 = 9$

$y = \dots\dots\dots$
(2)

(c) Solve $2(w + 1) = 10$

$w = \dots\dots\dots$
(2)

(Total 5 marks)

Question 21

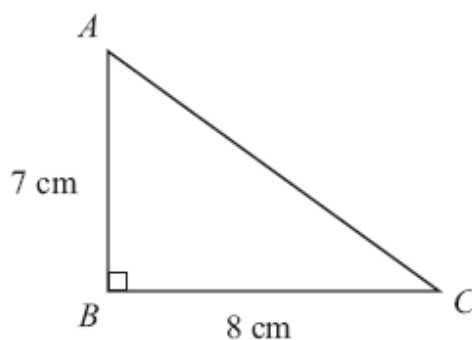


Diagram **NOT**
accurately drawn

ABC is a right-angled triangle.

$AB = 7$ cm,

$BC = 8$ cm.

Work out the length of AC .

Give your answer correct to 2 decimal places.

..... cm

(Total 3 marks)

Question 22

The equation

$$x^3 - x = 30$$

has a solution between 3 and 4

Use a trial and improvement method to find this solution.

Give your answer correct to 1 decimal place.

You must show **all** your working.

$x = \dots\dots\dots$

(Total 4 marks)

Question 23

The diameter of a circle is 15 centimetres.

Work out the circumference of the circle.

Give your answer, in centimetres, correct to 1 decimal place.

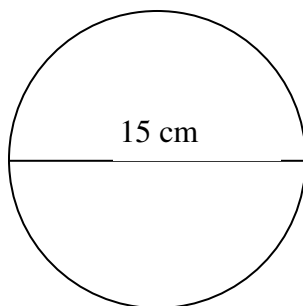


Diagram **NOT**
accurately drawn

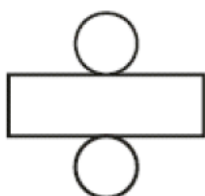
.....
(3 marks)

Question 24

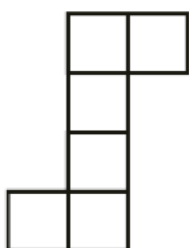
Here are the names of some solids.

sphere cuboid pyramid cone cube cylinder

Choose a word from the list to complete each of these statements.



is the net of a



is the net of a

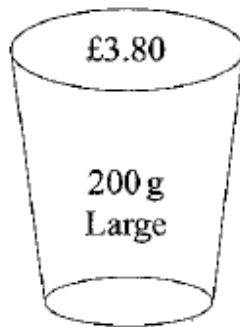


is the net of a

[3]

Total 3 marks

***Question 25**



A Large tub of popcorn costs £3.80 and holds 200 g.

A Regular tub of popcorn costs £3.50 and holds 175 g.

Rob says that the 200 g Large tub is the better value for money.

Linda says that the 175 g Regular tub is the better value for money.

Who is correct?

.....

Explain the reasons for your answer.

You must show all your working.

Total 3 marks

Question 26

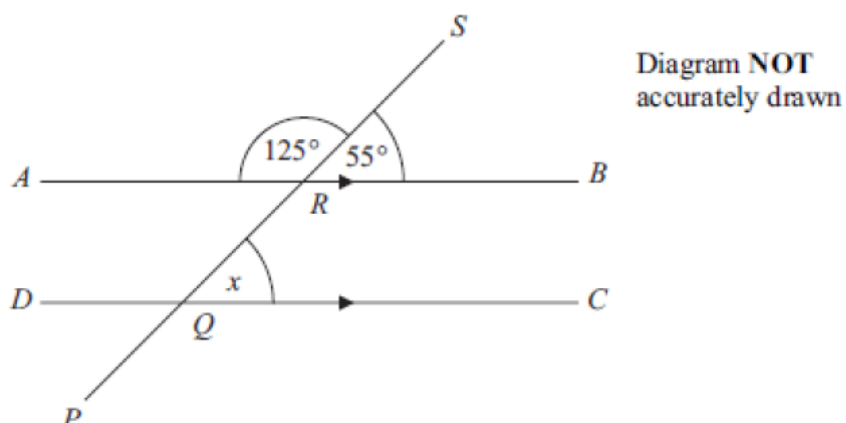
The two-way table shows some information about the eating habits of the 30 students.

	Boys	Girls	Total
Meat eating	12	10	
Vegetarian	2		
Vegan		1	
Total	14		30

Complete the two-way table.

Total 3 marks

Question 27



ARB is parallel to DQC .

$PQRS$ is a straight line.

Angle $SRB = 55^\circ$.

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

.....^o

(ii) Give a reason for your answer.

.....
.....

(Total 2 marks)

Question 28

A museum has these charges.

Adult Ticket	£2.50
Child Ticket	£1.25
Family Ticket (2 adults and 3 children)	
	£6.50

Mr and Mrs Iqbal and their three children visit the museum.

Work out how much they will save by buying one family ticket rather than 5 separate tickets.

£

(Total 4 marks)

***Question 29**

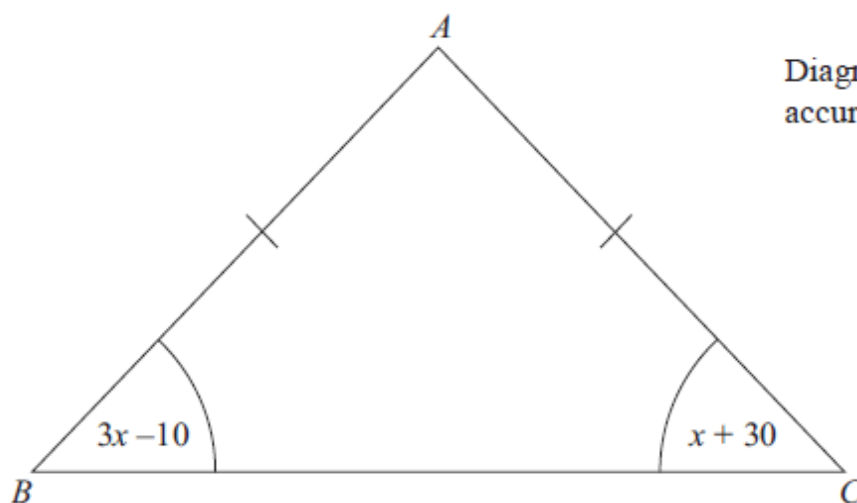


Diagram NOT
accurately drawn

ABC is an isosceles triangle.
 $AB = AC$

- (a) Explain why $3x - 10 = x + 30$

..... (1)

- (b) Solve $3x - 10 = x + 30$

$x =$

Total 2 marks

END OF QUESTIONS