

Edexcel GCSE

Mathematics (Linear) – 1MA0

ANGLES

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

Use black ink or ball-point pen.

Fill in the boxes at the top of this page with your name, centre number and candidate number.

Answer all questions.

Answer the questions in the spaces provided – there may be more space than you need.

Calculators may be used.

Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.

Questions labelled with an **asterisk (*)** are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

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.

1.

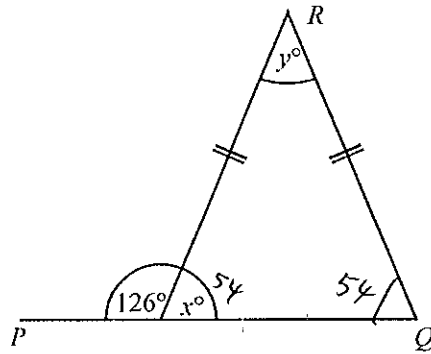


Diagram NOT accurately drawn

PQ is a straight line.

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

.....54.....°

(1)

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

.....72.....°

(ii) Give reasons for your answer.

.....angles at the base of an isosceles triangle
are equal.....

(3)

(4 marks)

2.

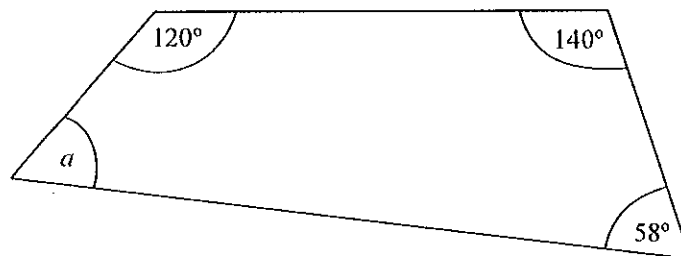


Diagram NOT accurately drawn

Work out the size of the angle a .

.....42.....°

(2 marks)

3.

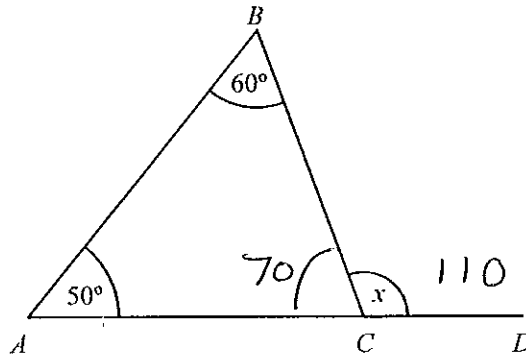


Diagram NOT accurately drawn

In the diagram, ABC is a triangle.

ACD is a straight line.

Angle $CAB = 50^\circ$.

Angle $ABC = 60^\circ$.

Work out the size of the angle marked x .

.....110.....°

(2 marks)

4.

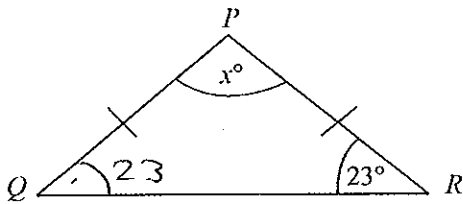


Diagram NOT accurately drawn

PQR is an isosceles triangle.

$PQ = PR$.

Angle $R = 23^\circ$.

Work out the value of x .

$x =$ 134.....

(2 marks)

5.

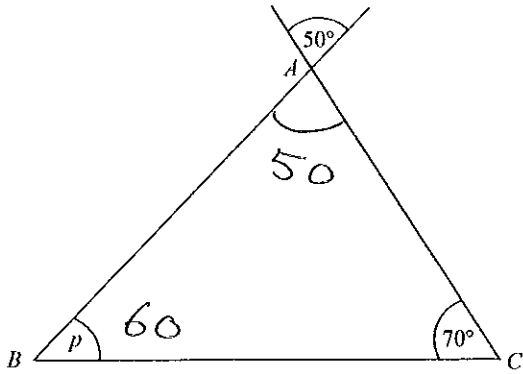


Diagram NOT accurately drawn

ABC is a triangle.

Work out the size of the angle marked p .

$p = \dots 60 \dots^\circ$

(2 marks)

6.

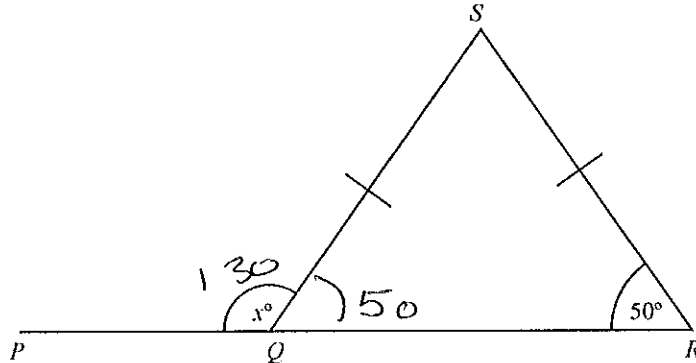


Diagram NOT accurately drawn

PQR is a straight line.
 $SQ = SR$.

(i) Work out the size of the angle marked x°

$\dots 130 \dots^\circ$

(ii) Give reasons for your answer.

\dots angles at the base of an isosceles triangle are equal
 \dots angles on a straight line add up to 180°

(3 marks)

7.

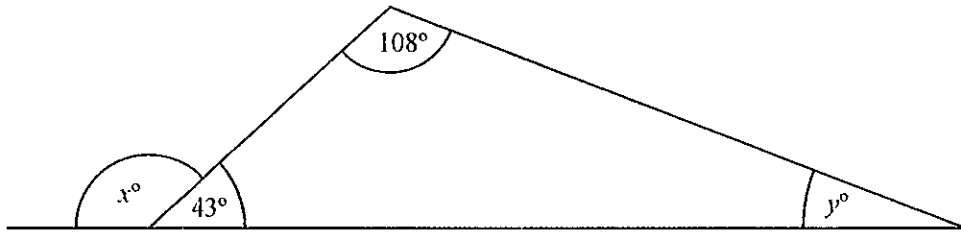


Diagram NOT accurately drawn

(a) Work out the value of x .

$$x = \dots 137 \dots$$

(1)

(b) Work out the value of y .

$$y = \dots 29 \dots$$

(2)

(3 marks)

8.

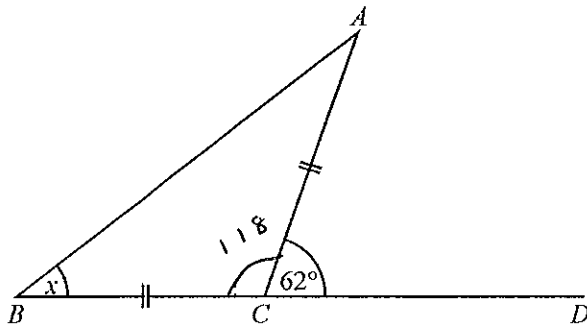


Diagram NOT accurately drawn

Triangle ABC is isosceles, with $AC = BC$.

Angle $ACD = 62^\circ$.

BCD is a straight line.

Work out the size of angle x .

$$x = \dots 31 \dots^\circ$$

(2 marks)

9.

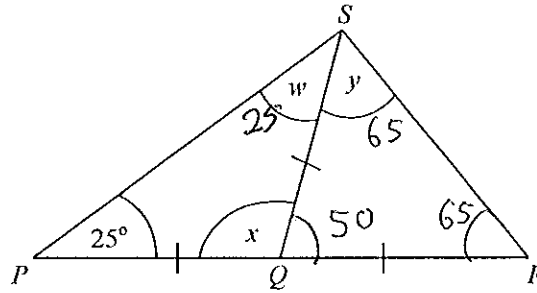


Diagram NOT accurately drawn

PQR is a straight line.

$PQ = QS = QR$.

Angle $SPQ = 25^\circ$.

(a) (i) Write down the size of angle w .

.....25.....°

(ii) Work out the size of angle x .

.....130.....°

(2)

(b) Work out the size of angle y .

.....65.....°

(2)

(4 marks)

10.

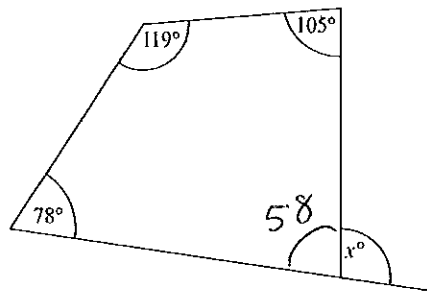


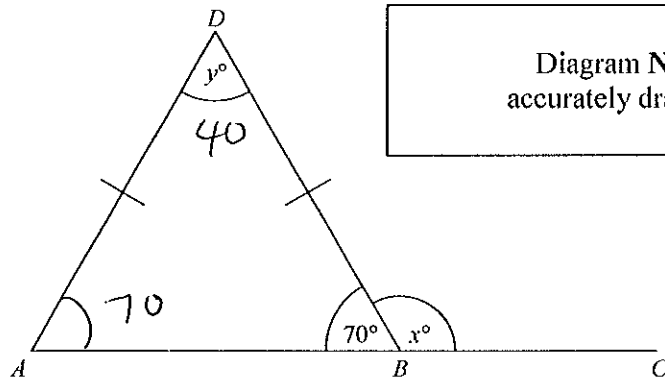
Diagram NOT accurately drawn

Work out the value of x .

$x =$ 122.....

(3 marks)

11.



ABD is a triangle. ABC is a straight line.
 Angle $ABD = 70^\circ$.
 $AD = BD$.

(a) (i) Work out the value of x .

$x = \dots 110 \dots$

(ii) Give a reason for your answer.

angles on a straight line add to 180° (2)

(b) (i) Work out the value of y .

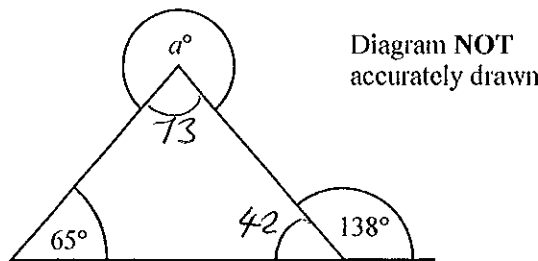
$y = \dots 40 \dots$

(ii) Give a reason for your answer.

angles at the base of an isosceles triangle are equal
 angles in a triangle add up to 180° (3)

(5 marks)

12.



Work out the value of a .

$a = \dots 287 \dots$

(3 marks)

13.

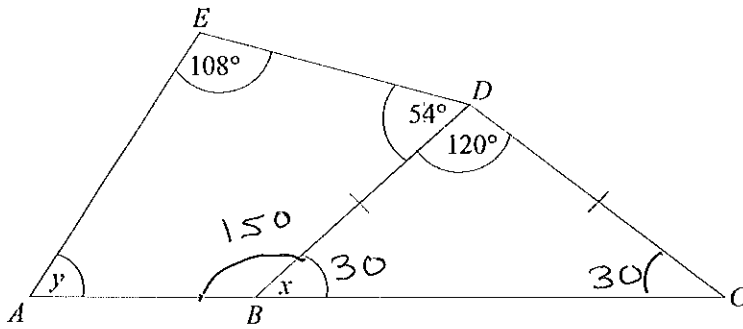


Diagram **NOT** accurately drawn

In the diagram, ABC is a straight line and $BD = CD$.

(a) Work out the size of angle x .

..... 30°

(2)

(b) Work out the size of angle y .

..... 48°

(3)

(5 marks)
