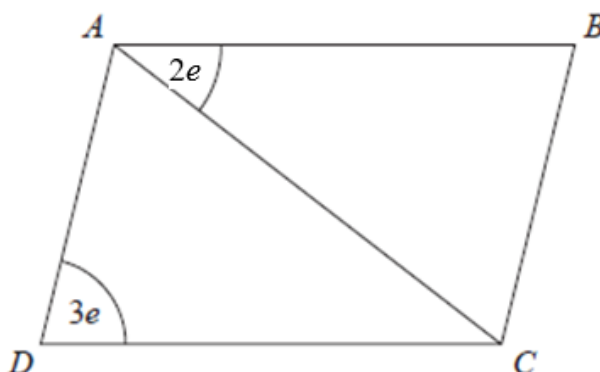


**QUESTION 1**

$ABCD$ is a parallelogram.



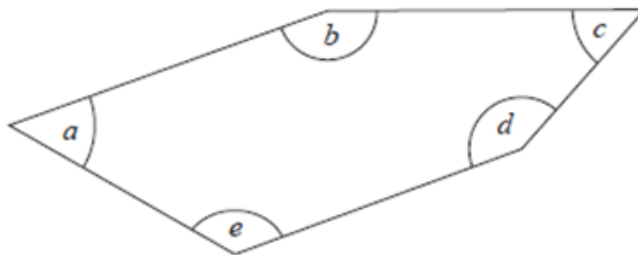
All angles are measured in degrees.

Find an expression, in terms of e , for the size of angle CAD .
Give a reason for each stage of your working.

.....
(3 marks)

QUESTION 2

Here is a pentagon.



Angle $a =$ angle c

Angle $b = 162^\circ$

Angle d is four times the size of angle c

Angle e is three times the size of angle c

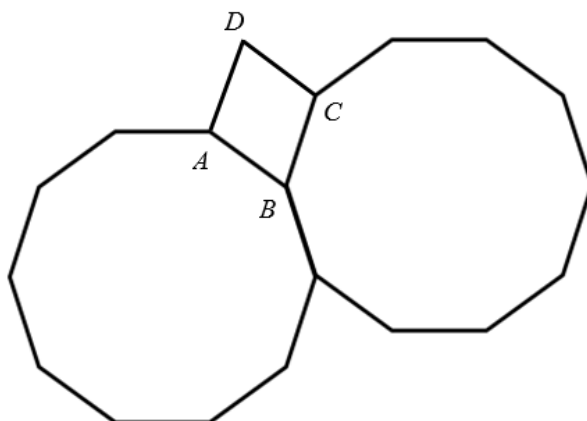
Work out the size of angle a

.....^o

(4 marks)

QUESTION 3

The diagram shows two congruent regular 10-sided polygons.
 $ABCD$ is a quadrilateral.

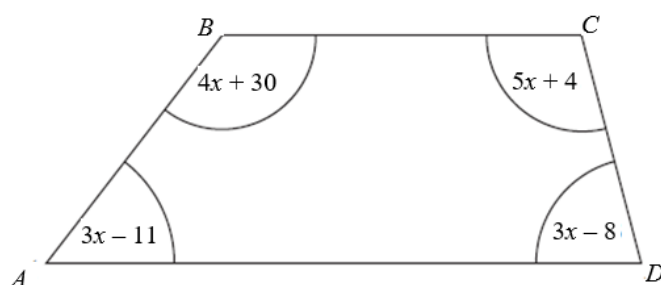


Show that $ABCD$ is **not** a square.

(3 marks)

QUESTION 4

$ABCD$ is a quadrilateral.



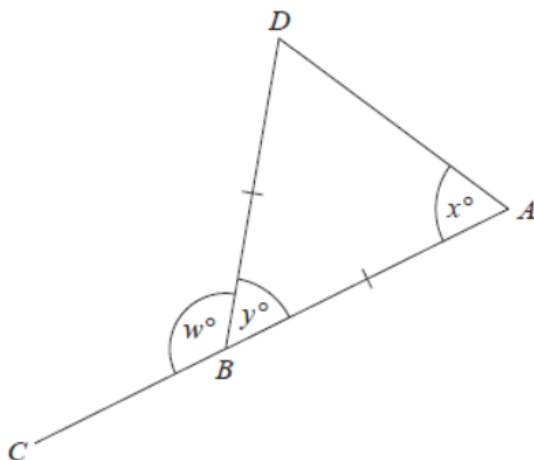
All angles are measured in degrees.

Show that $ABCD$ is a trapezium.

[4]

Question 5

The diagram shows an isosceles triangle ABD and the straight line ABC .



$$BA = BD$$

$$x : y = 3 : 2$$

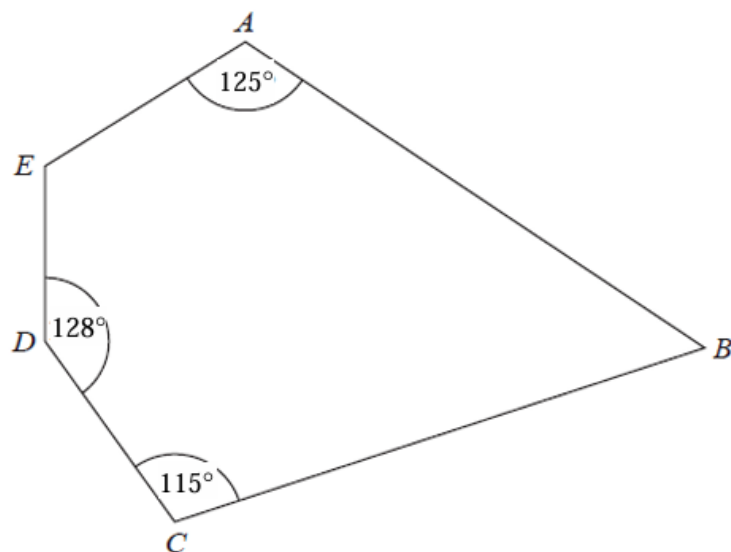
Work out the value of w .

$$w = \dots\dots\dots$$

(4 marks)

Question 6

Here is a pentagon.



Angle $AED = 3 \times$ angle ABC

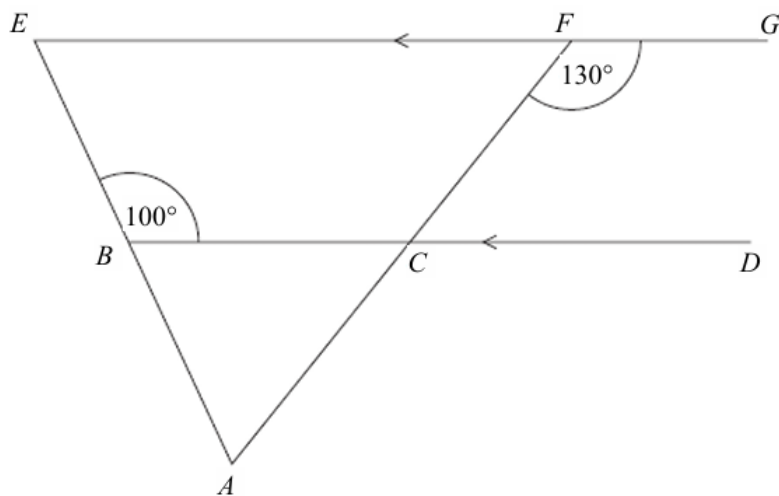
Work out the size of angle AED .
You must show all your working.

.....° **(4)**

Question 7

ACF and ABE are straight lines.

EFG and BCD are parallel lines.



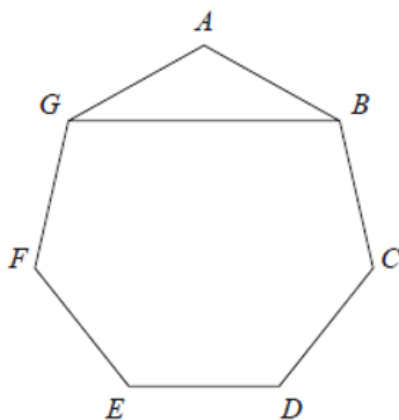
Show that triangle ABC is isosceles.

Give a reason for each stage of your working.

(5)

Question 8

$ABCDEFG$ is a regular heptagon.



The area of triangle ABG is 50 cm^2

Calculate the length of GB .

Give your answer correct to 3 significant figures.

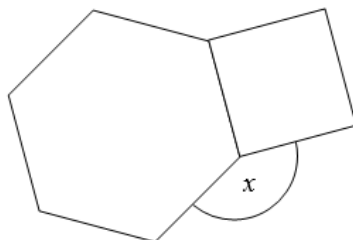
You must show all your working.

..... cm

(5 marks)

Question 9

Here is a regular hexagon and a square.



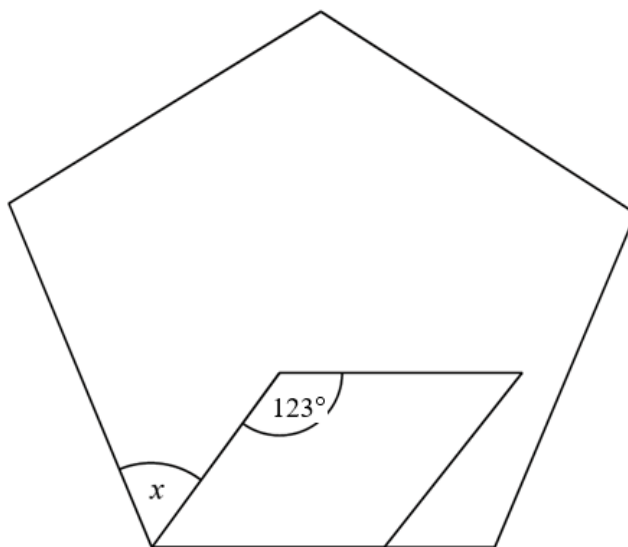
Work out the size of the angle marked x .
You must show all your working.

.....°

(3 marks)

Question 10

The diagram shows a regular pentagon and a parallelogram.



Work out the size of the angle marked x .
You must show all your working.

-----**(4)**