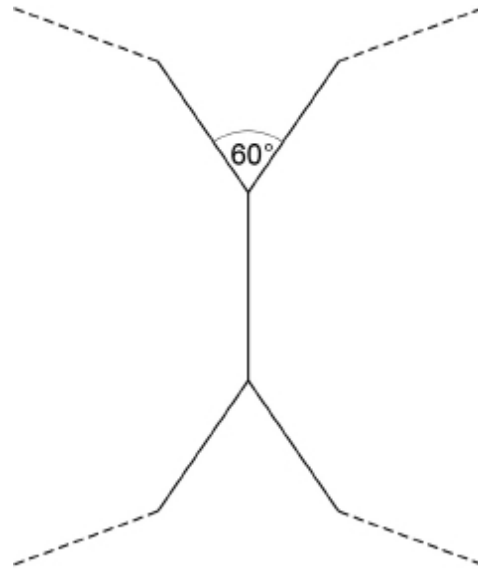


**Non-Calculator**

**Q1.**

Two congruent regular polygons are joined together.



Not drawn accurately

Work out the number of sides on each polygon.

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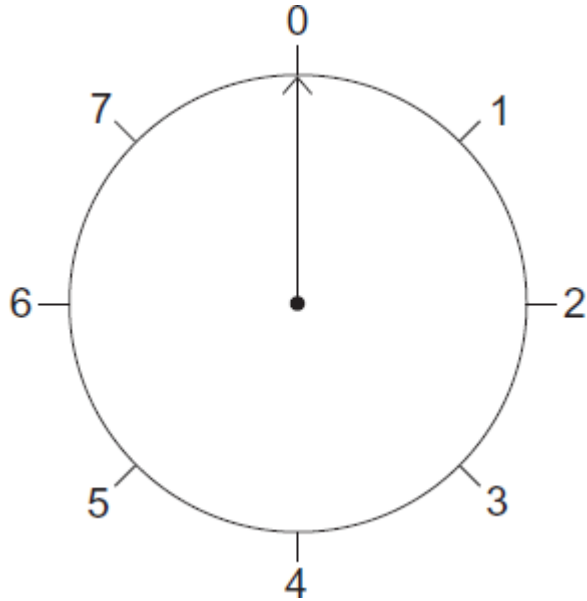
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Answer \_\_\_\_\_

**(Total 3 marks)**

**Q2.**

A circular spinner has 8 **equal** divisions as shown.



- (a) The arrow turns clockwise from 0 to 4  
What angle does it turn through?

Answer \_\_\_\_\_ degrees (1)

- (b) The arrow turns  $45^\circ$  clockwise from 5  
What number does it point to?

Answer \_\_\_\_\_ (1)

- (c) The arrow turns anti-clockwise from 7 to 4  
What angle does it turn through?

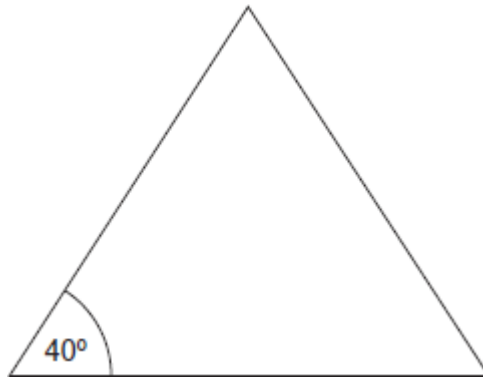
Answer \_\_\_\_\_ degrees (1)

**(Total 3 marks)**

**Q3.**

The diagram shows an **isosceles** triangle.

Not drawn accurately



Work out the possible **sizes** of the other **two** angles.  
Give both **different** pairs of answers.

$40^\circ$  and \_\_\_\_\_ and \_\_\_\_\_

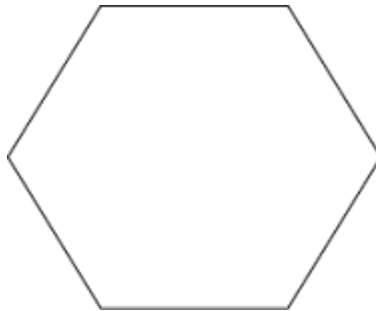
or  $40^\circ$  and \_\_\_\_\_ and \_\_\_\_\_

(Total 3 marks)

**Q4.**

Show that the interior angle of a regular hexagon is  $120^\circ$ .

Not drawn accurately



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(Total 2 marks)

**Q5.**

A regular polygon has an exterior angle of  $20^\circ$

Work out the number of sides of the polygon.

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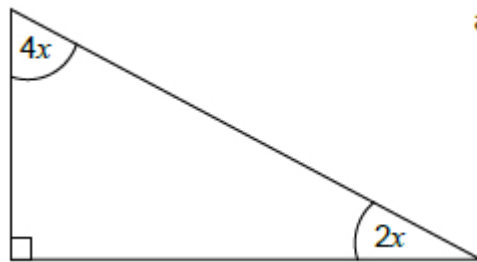
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Answer \_\_\_\_\_

**(Total 2 marks)**

**Q6.**

Work out the value of  $x$ .



Not drawn  
accurately

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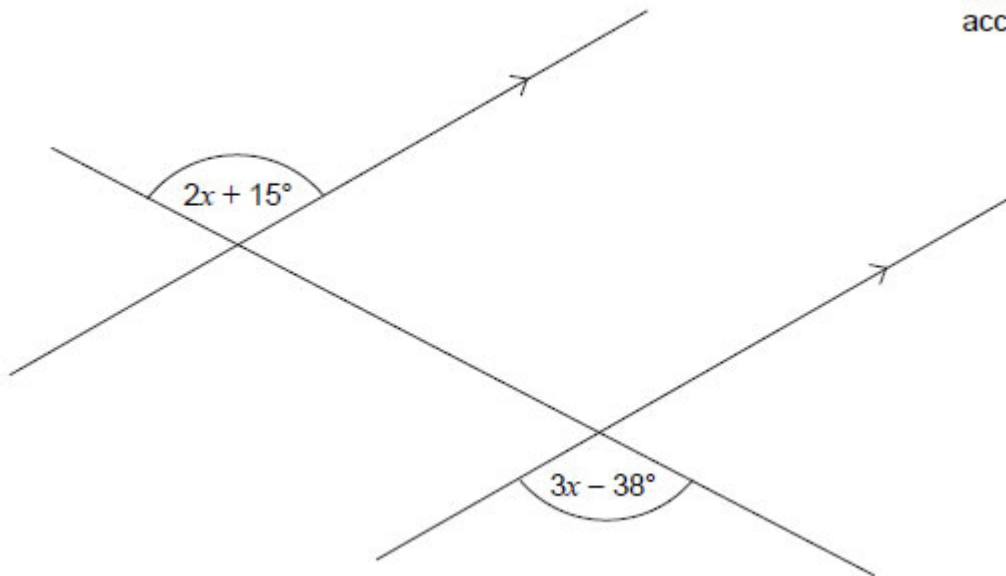
Answer \_\_\_\_\_ degrees

**(Total 3 marks)**

**Q7.**

Three straight lines are shown.

Not drawn  
accurately



Work out the value of  $x$ .

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Answer \_\_\_\_\_

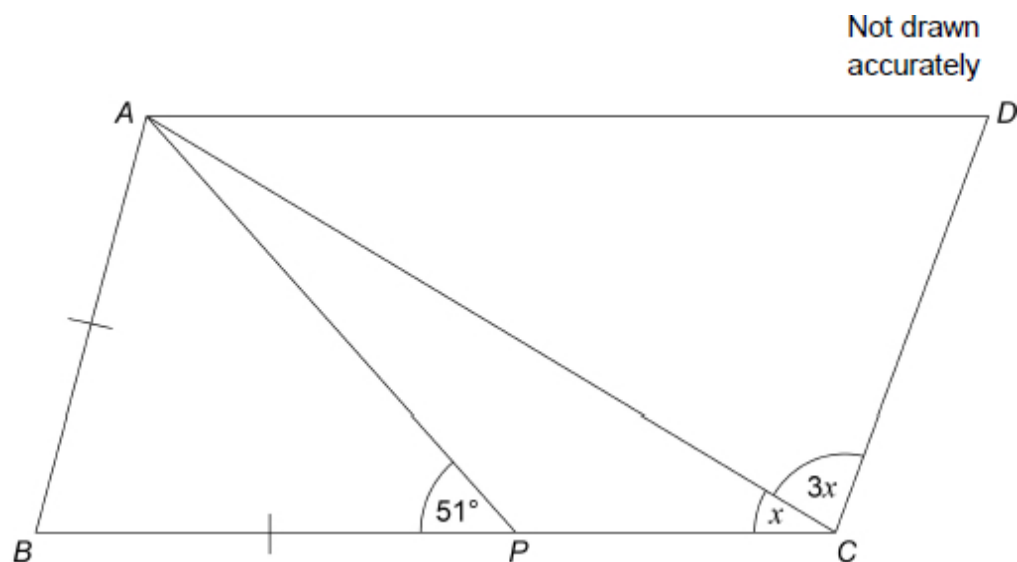
(Total 3 marks)

## Calculator

**Q8.**

$ABCD$  is a parallelogram.

$$AB = BP$$



Work out the size of angle  $x$ .

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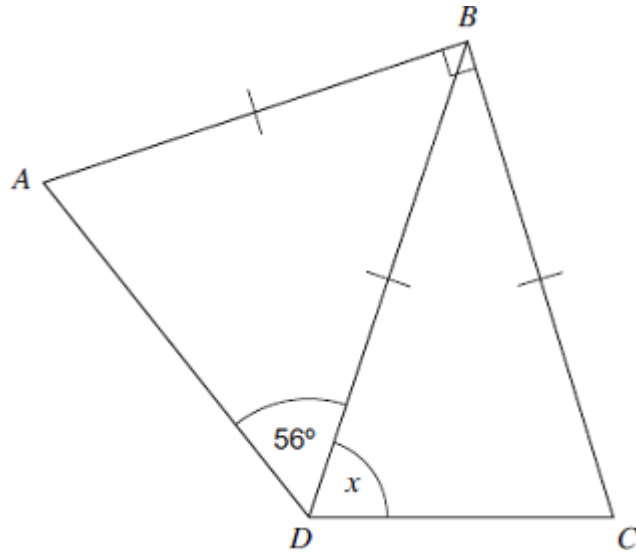
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Answer \_\_\_\_\_ degrees  
(Total 4 marks)

**Q9.**

Triangles  $ABD$  and  $BCD$  are isosceles.  
Angle  $ABC$  is  $90^\circ$

Not drawn  
accurately



Work out the size of angle  $x$ .

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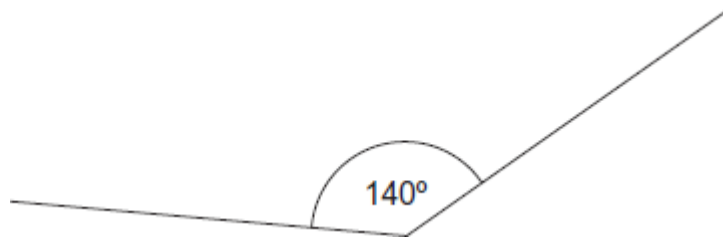
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Answer \_\_\_\_\_ degrees  
(Total 4 marks)

**Q10.**

The diagram shows an interior angle of a **regular** polygon.

Not drawn accurately



- (a) Work out the size of an exterior angle of the polygon.

\_\_\_\_\_

Answer \_\_\_\_\_ degrees

(1)

- (b) Work out the number of sides of the polygon.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Answer \_\_\_\_\_

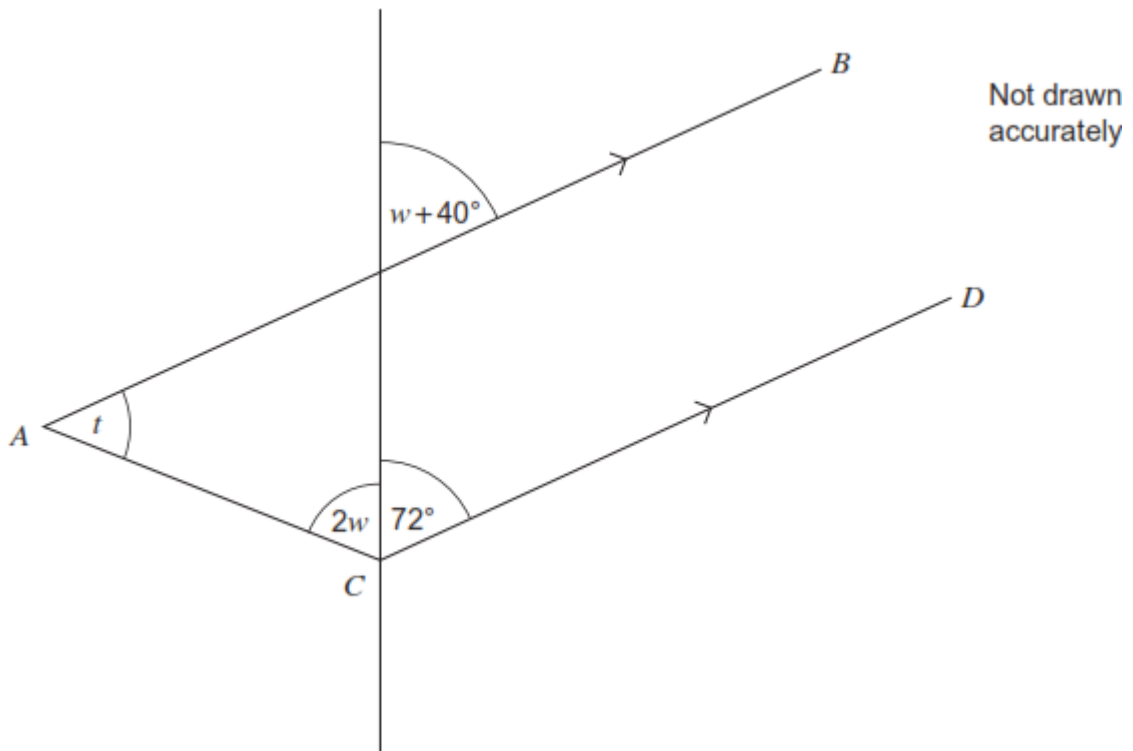
(2)

(Total 3 marks)



**Q11.**

$AB$  is parallel to  $CD$ .



Work out the value of  $t$ .

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Answer \_\_\_\_\_ degrees  
(Total 5 marks)

**Q12.**

One of the angles in a triangle is  $60^\circ$

Tick a box for each statement.

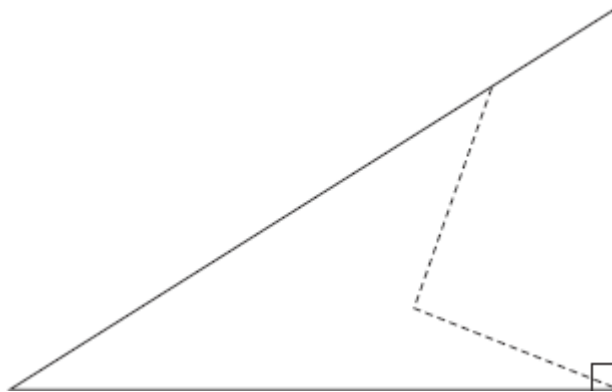
	<b>Must be true</b>	<b>Cannot be true</b>	<b>Might be true</b>
The triangle is equilateral			
The triangle has at least one other acute angle			
The triangle is right-angled			
The other two angles are each less than $60^\circ$			

**(Total 4 marks)**

**Q13.**

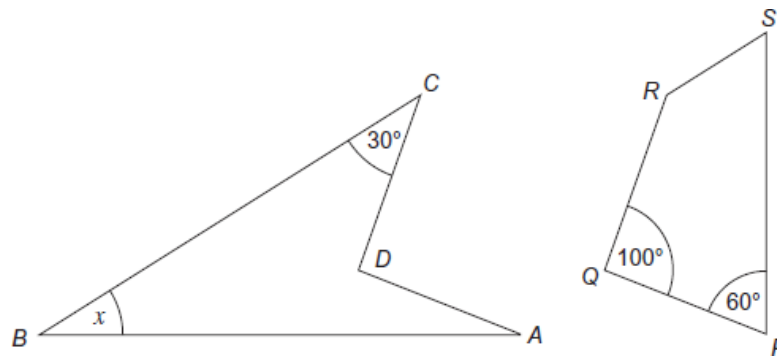
The diagram shows a right-angled triangle.

Not drawn accurately



The triangle is cut along the dotted lines to make two quadrilaterals, *ABCD* and *PQRS*.

Not drawn accurately



Work out the size of angle *x*.

You **must** show your working, which may be on the diagram.

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Answer \_\_\_\_\_ degrees  
(Total 4 marks)

**Q14.**

The exterior angle of a regular polygon is  $45^\circ$

Circle the name of the regular polygon.

pentagon

hexagon

octagon

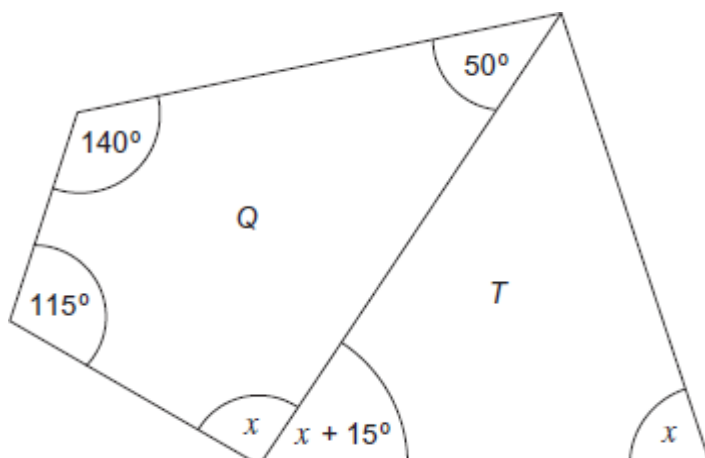
decagon

(Total 1 mark)

**Q15.**

The diagram shows quadrilateral  $Q$  and triangle  $T$  joined together.

Not drawn accurately



What type of triangle is  $T$ ?

You must show your working, which may be on the diagram.

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Answer \_\_\_\_\_

(Total 5 marks)