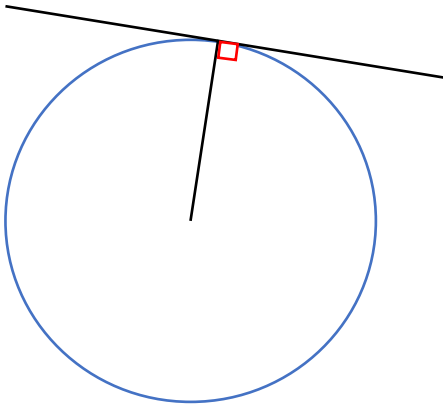
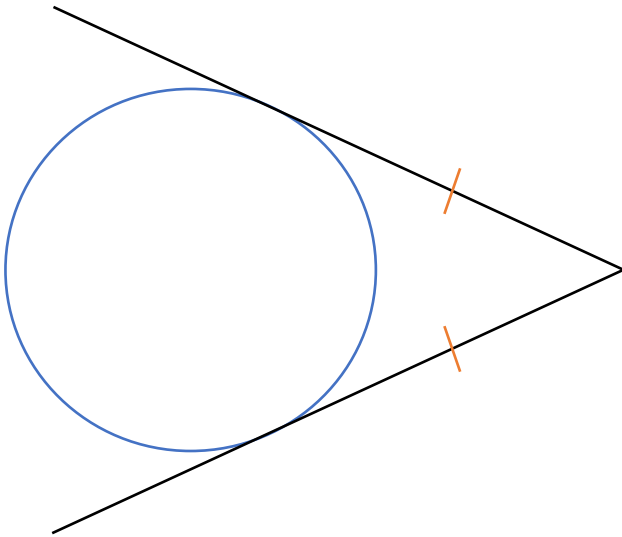


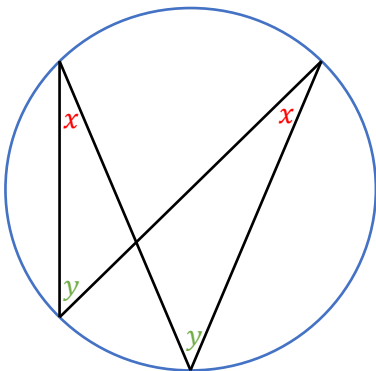
Theorems:



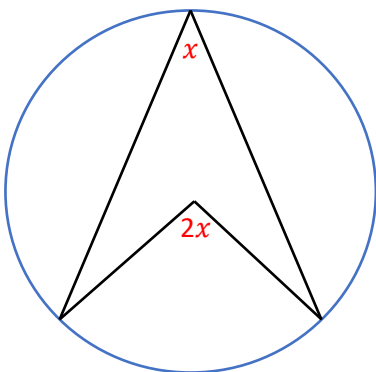
A tangent meets a radius at 90°



Tangents to a point are always the same length.

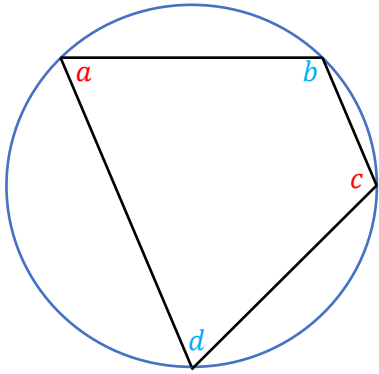


Angles in the same segment are equal.
(This one tends to look a bit like a bow tie)



The angle at the centre is always twice the angle at the circumference.

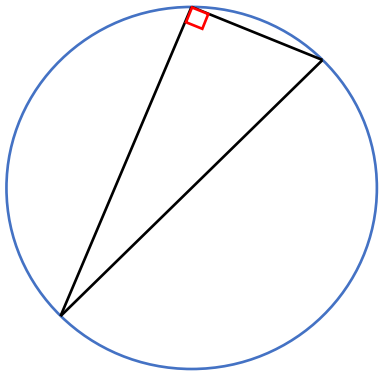
Theorems:



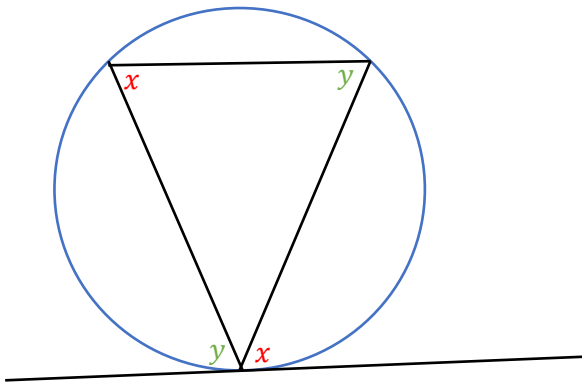
Opposite angles in a cyclic quadrilateral add up to 180° .

$$a + c = 180 \text{ and } b + d = 180$$

(Remember all points need to be on the circumference)

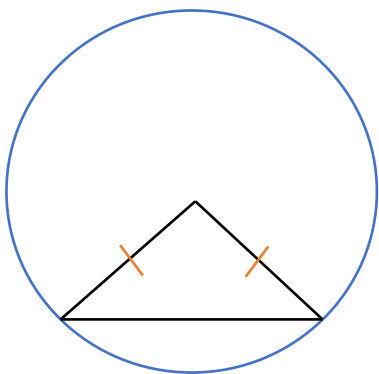


The angle in a semi-circle is a right angle.



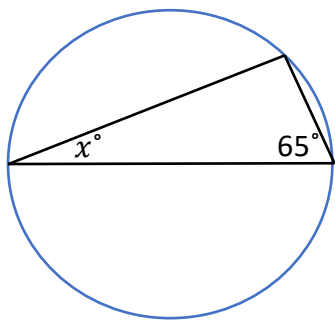
$x = x$ and $y = y$ by the Alternate Segment Theorem.

(This one is usually the hardest to spot, so if you can't find another rule try this one!)



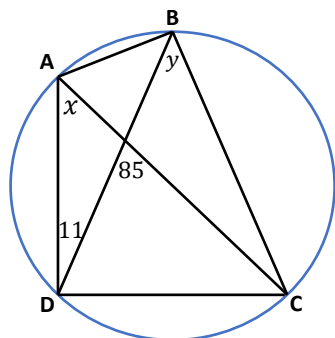
Radius' are always equal length. This usually form isosceles triangles which may help us.

Q1)



Find x . Give reasons for your answer.

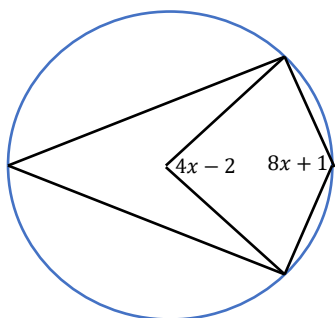
Q2)



AC is a diameter of the circle.

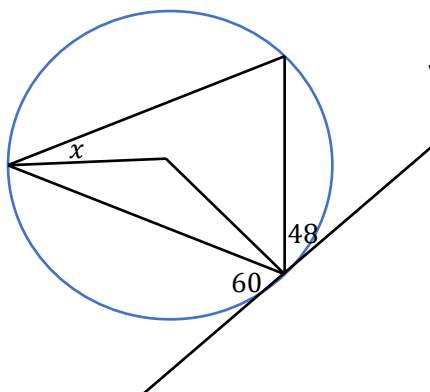
Find x and y , giving reasons for your answers.

Q3)



Find the value of x , giving reasons for your answer.

Q4)



Find the value of x , giving reasons for your answer.