

Circle Theorems: Angle in a semicircle is 90°

Maths

Mr Chan

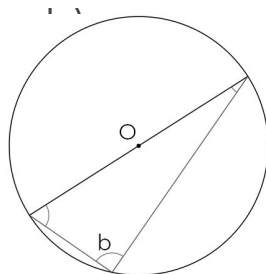
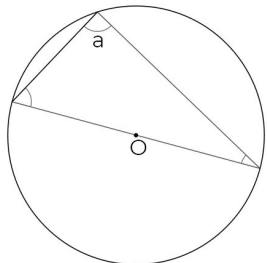


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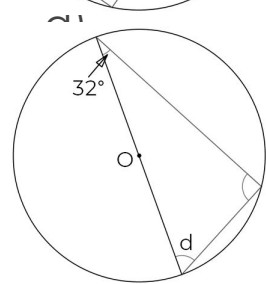
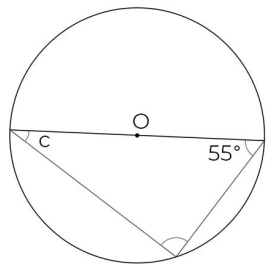
1. Work out the size of each angle marked with a letter.

Give a reason for your answers.

a)



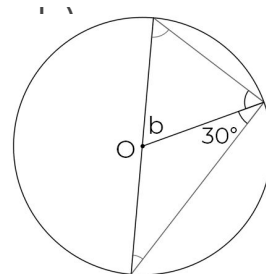
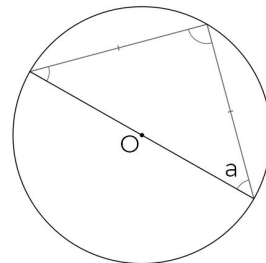
c)



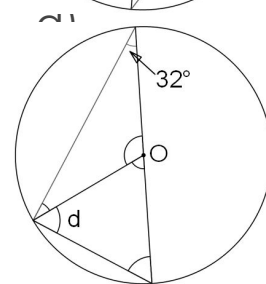
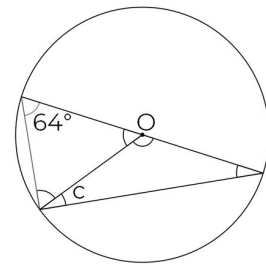
2. Work out the size of each angle marked with a letter.

Give a reason for your answers.

a)

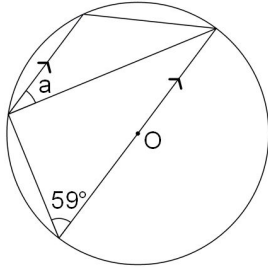


c)

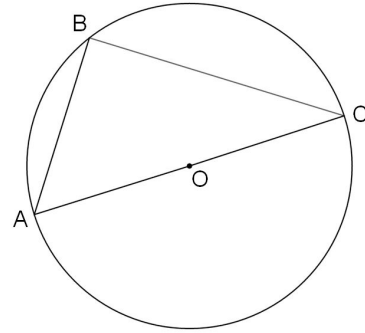


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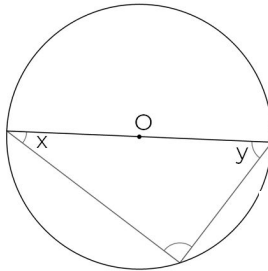
3. Work out the size of angle a.



5. Prove that the angle in a semicircle is 90° .



4.



$$x : y = 2 : 7$$

Work out angles x and y



Answers

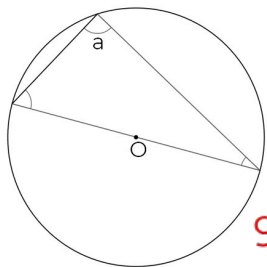


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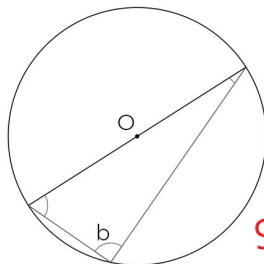
1. Work out the size of each angle marked with a letter.

Give a reason for your answers.

a)

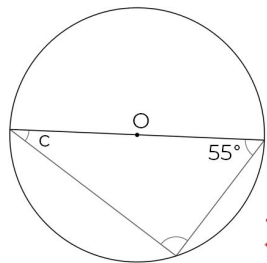


90°

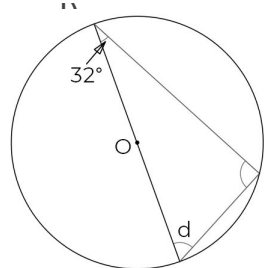


90°

c)



35°



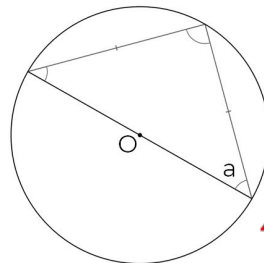
58°

The angle in a semicircle is 90° .

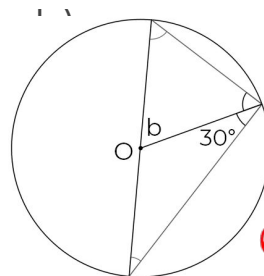
2. Work out the size of each angle marked with a letter.

Give a reason for your answers.

a)

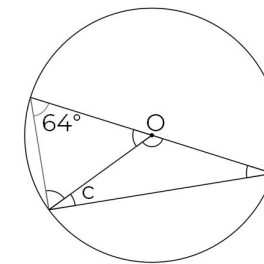


45°

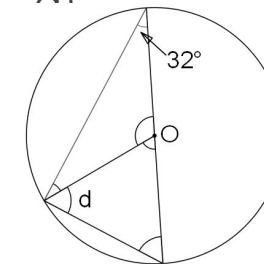


60°

c)



26°



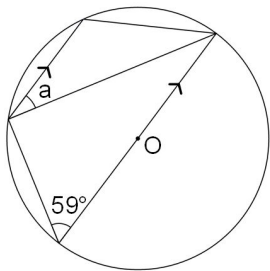
58°

The angle in a semicircle is 90° .



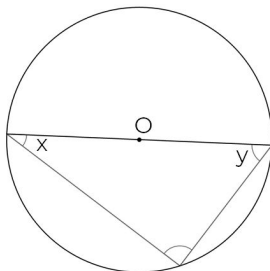
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3. Work out the size of angle a.



31°

4.

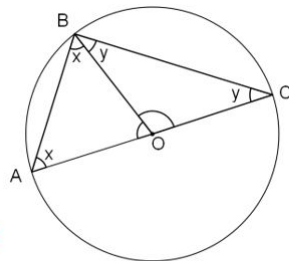


$x : y = 2 : 7$

$x = 20^\circ$ $y = 70^\circ$

Work out angles x and y

5. Prove that the angle in a semicircle is 90° .



Draw line OB (radius)

Let angle OBA = x and OBC = y so $ABC = x + y$

angle OBA = angle OAB = x (base angles in an isosceles triangle)

angle OBC = angle OCB = y (base angles in an isosceles triangle)

angle OAB + angle ABC + angle OCB = 180° (angles in a triangle add up to 180°)

$$x + x + y + y = 180$$

$$2x + 2y = 180$$

$$2(x + y) = 180$$

$$x + y = 90$$

$$ABC = 90$$

