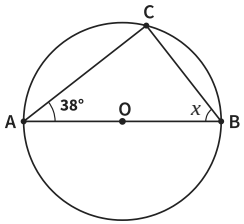
Circle theorems: angle in a semicircle

1

AB is a diameter. Find x. Give a reason.



Angle ACB = 90°

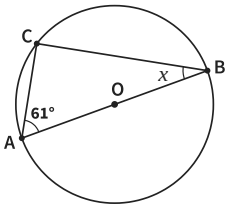
$x = 180 - 90 - 38$

$x =$ _____

Reason: The angle in a semicircle is 90°.

2

AB is a diameter. Find x. Give a reason.



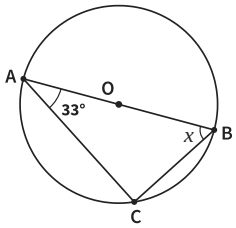
Angle ACB = 90°

$x =$ _____

Reason: The angle in

3

AB is a diameter. Find x. Give a reason.

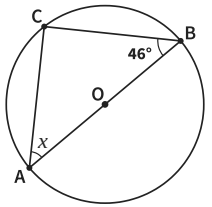


$x =$ _____

Reason: The

4

AB is a diameter. Find x. Give a reason.

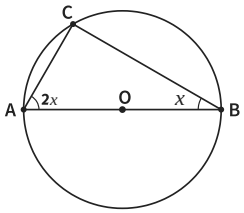


$x =$ _____

Reason:

5 *Notice the change!*

AB is a diameter. Find x. Give a reason.



Angle ACB = 90°

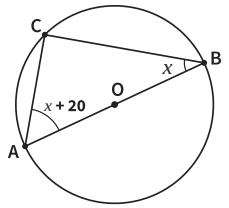
$2x + x = 90$

$x =$ _____

Reason: The angle in

6

AB is a diameter. Find x. Give a reason.

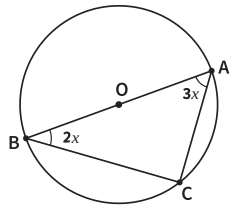


$x =$ _____

Reason: The

7

AB is a diameter. Find x. Give a reason.

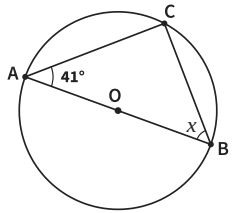


$x =$ _____

Reason:

8

AB is a diameter.
Sam says $x = 180 - 41 = 139°$.
Explain Sam's mistake.

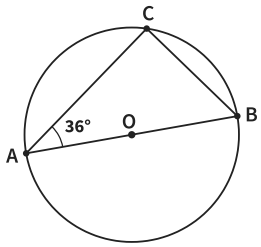


$x =$ _____

Circle theorems: angle in a semicircle *further practice*

9

AB is a diameter. Find angle ABC.



Answer _____

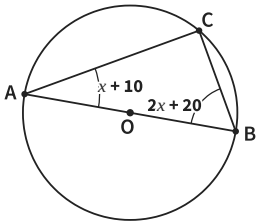
10

A, B and C are on a circle.
Angle ACB = 88°. Is AB a diameter?
Give a reason.

So _____

11

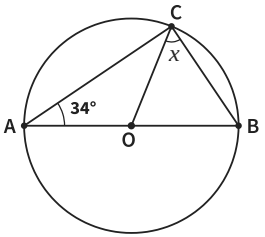
AB is a diameter. Find x.



Answer _____

12

O is the centre and AB is a diameter.
Find x.



Answer _____

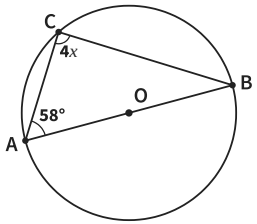
13

A rope is tied to two posts A and B at the ends of a diameter of a round pond, and pulled tight round a post C on the edge. The rope makes an angle of 31° with AB at A. Find the angle the rope makes at B.

Answer _____

14

AB is a diameter. Find x.



Answer _____

15

AB is a diameter of a circle and C is on the circle. Angle CAB is twice angle CBA. Find angle CAB.

Answer _____

16

AB is a diameter. C is on the circle,
AC = 6 cm and BC = 8 cm.
Find the radius of the circle.

Answer _____