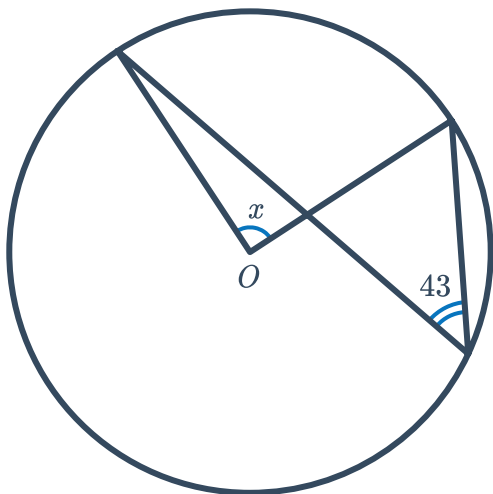


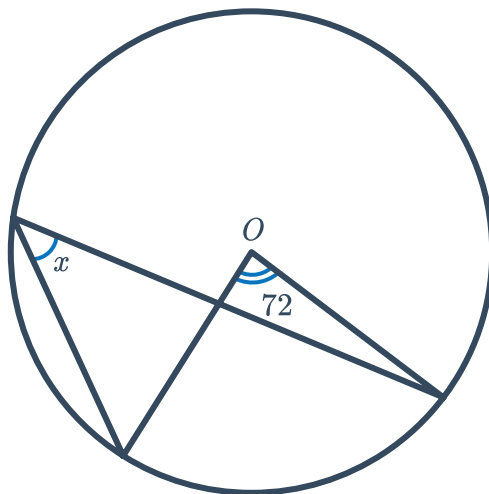
Missing angles

1 For each of the following circles with centre O , solve for x :

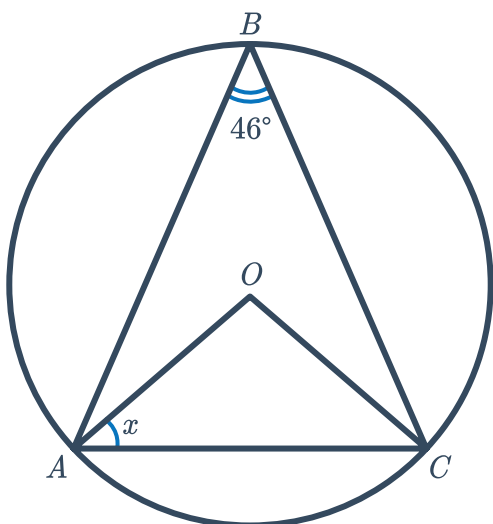
a



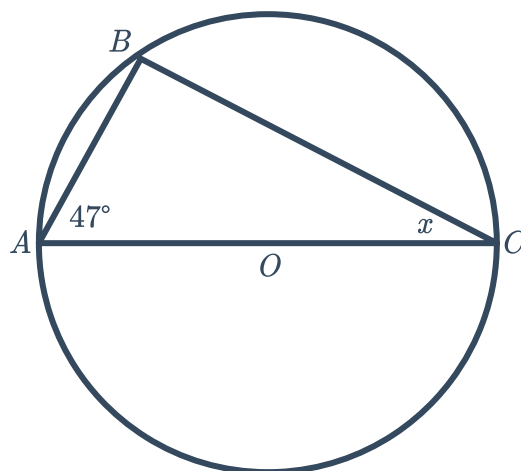
b



c

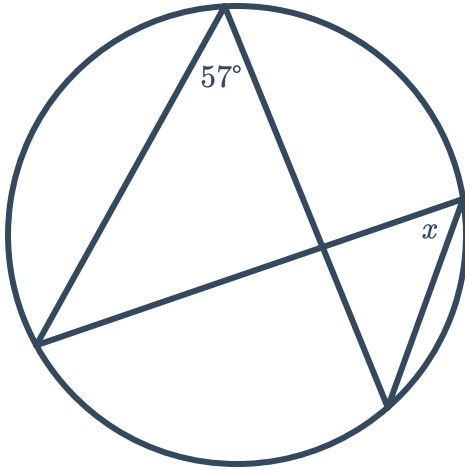


2 In the given diagram, AC is a straight line passing through centre O :
Solve for x .

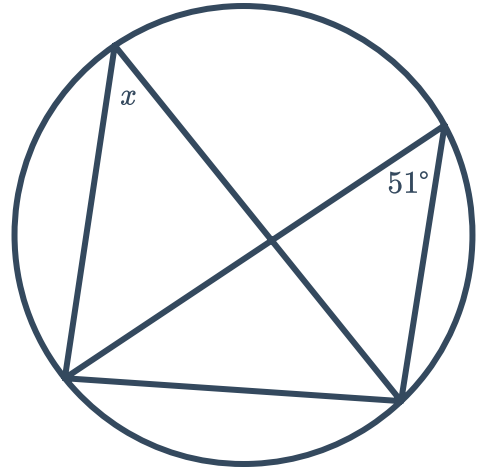


3 For each of the following circles, solve for x :

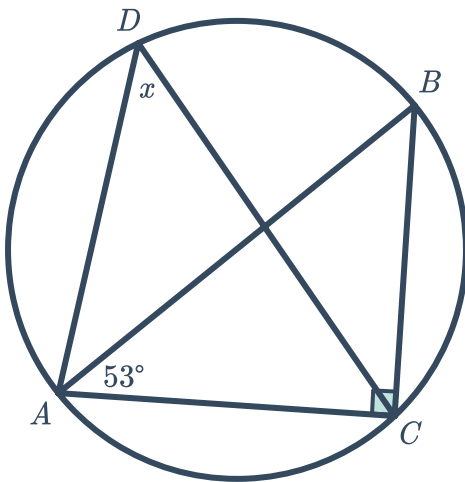
a



b

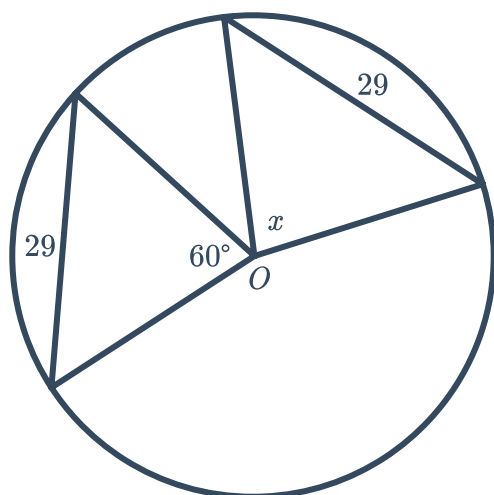


c

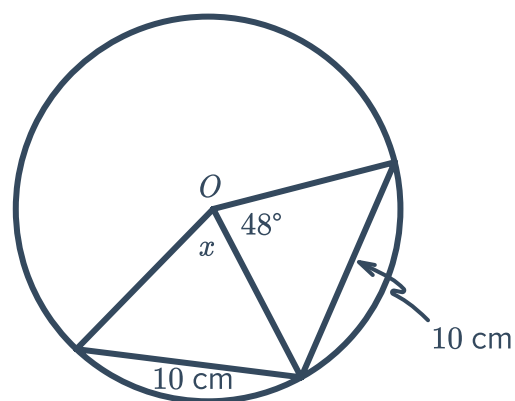


4 For each of the following circles with centre O , solve for x :

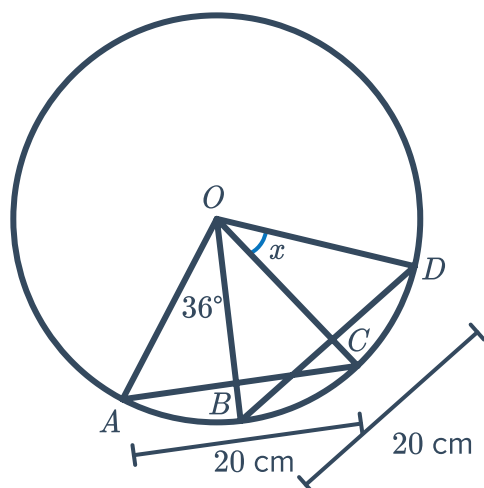
a



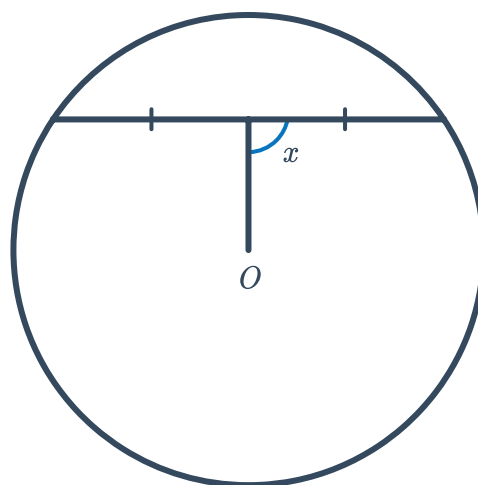
b



c



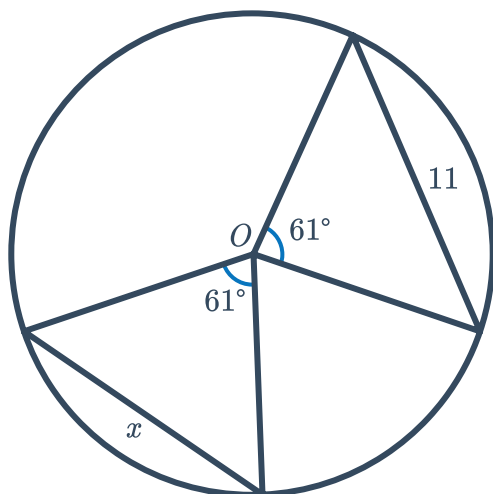
5 Consider the circle with centre O shown:
Solve for x .



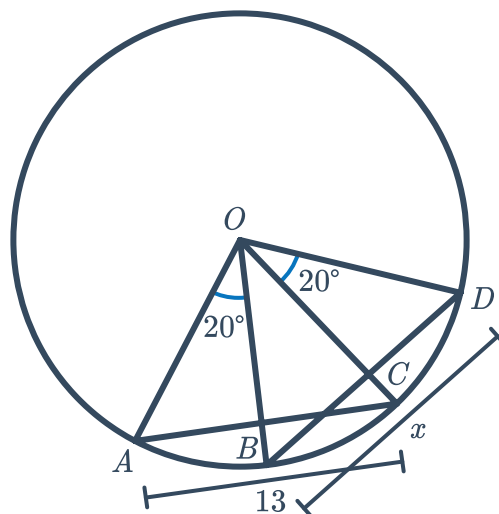
Missing lengths

6 For each of the following circles with centre O , solve for x :

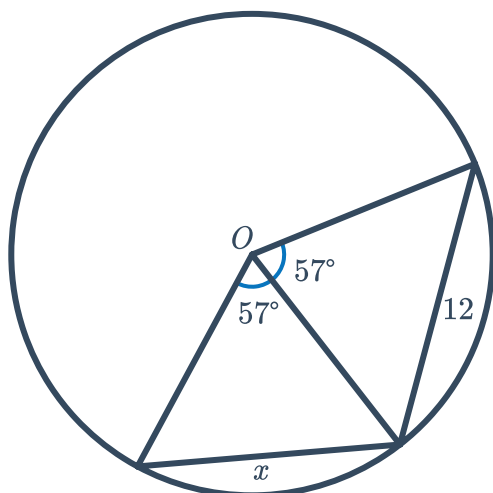
a



b



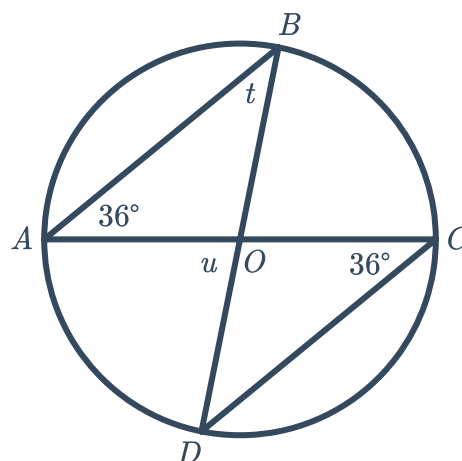
c



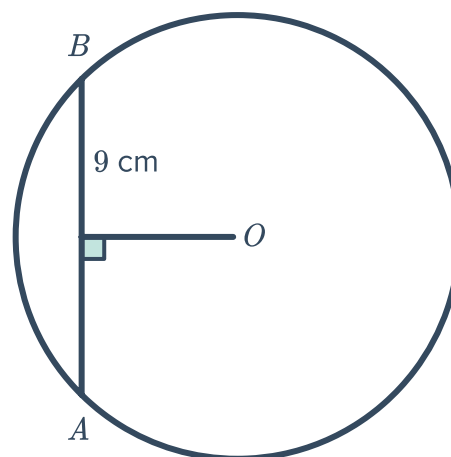
7 Consider the following circle where O is the centre:

a Solve for t .

b Solve for u .

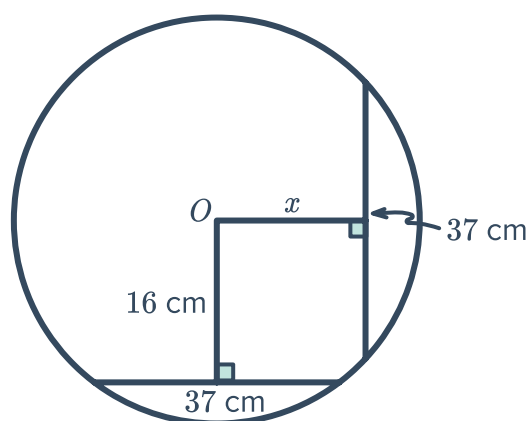


- 8 Consider the following circle where O is the centre:
Find the length AB .

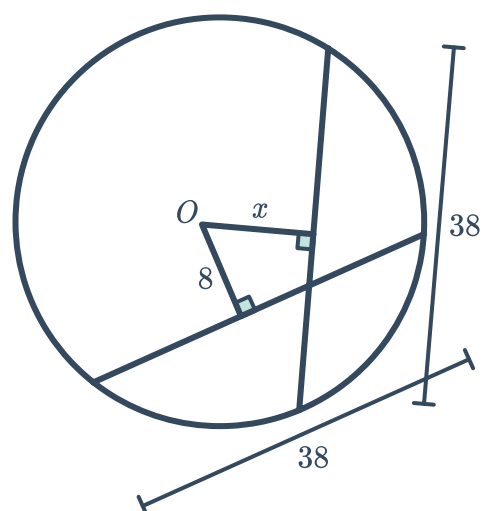


- 9 For each of the following circles with centre O , solve for x :

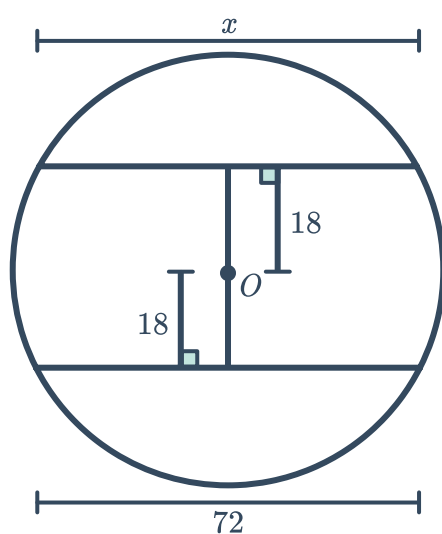
a



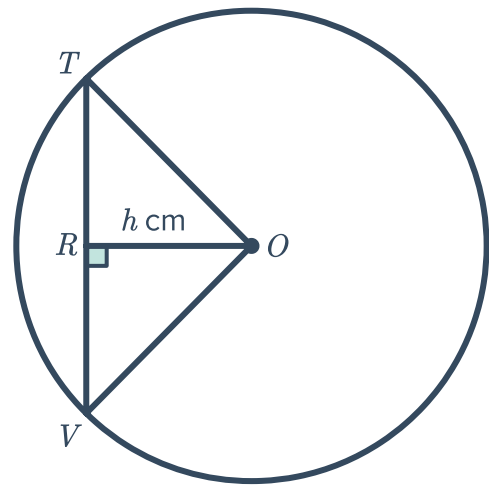
b



c

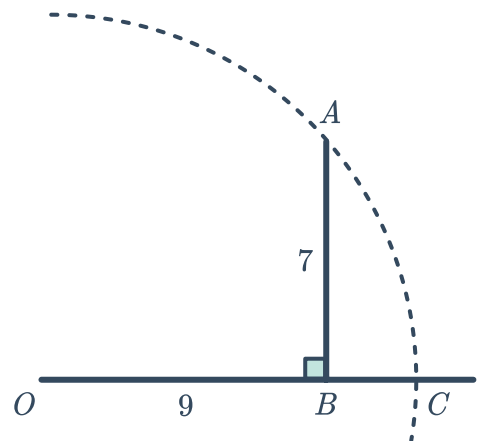


- 10 The given circle has $TR = 12$ cm, the radius is 13 cm, and OR has length h cm.
Find the area of $\triangle TOV$.



11 The diagram shows AC as the arc of a circle with O as its centre, $OB = 9$, and $AB = 7$:

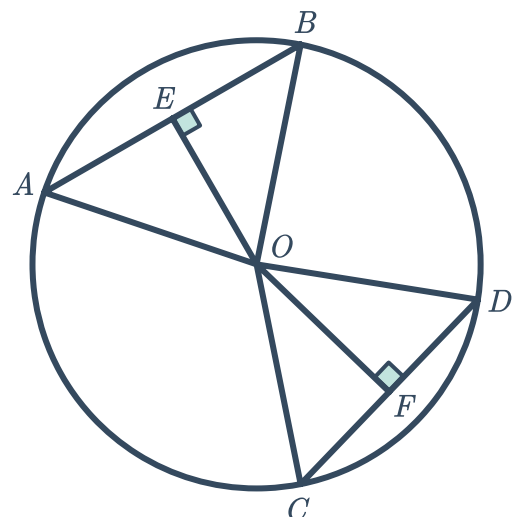
- a Find the exact length of OA .
- b Hence, find the exact length of BC .



Proofs

12 Let O be the centre of the given circle with $AB = CD$.

- a Prove that $\triangle ABO$ and $\triangle CDO$ are congruent.
- b Hence, prove that $\triangle BEO$ and $\triangle DFO$ are congruent.



- 13 Let O be the centre of the given circle:
Prove that x and y are complementary angles.

