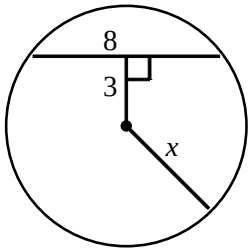
Geometry Practice: G.G.49
www.jmap.org

NAME:_____

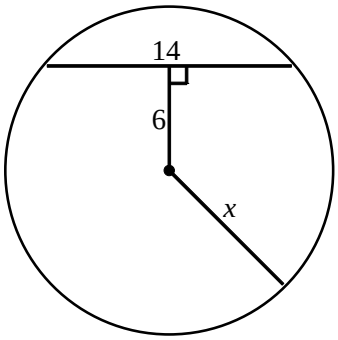
G.G.49: Investigate, justify, and apply theorems regarding chords of a circle: perpendicular bisectors of chords; the relative length of chords as compared to their distance from the center of the circle

1. Find the value of *x* to the nearest tenth.



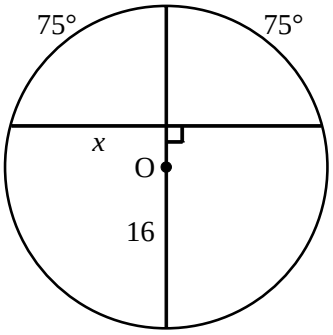
[A] 3.7 [B] 8.5 [C] 5.0 [D] 7.4

2. Find the value of *x* to the nearest tenth.



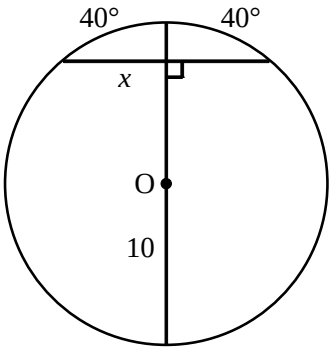
[A] 7.9 [B] 12.6 [C] 9.2 [D] 15.2

3. Find the value of *x* to the nearest tenth.



[A] 9.7 [B] 15.5 [C] 59.7 [D] 4.1

4. Find the value of *x* to the nearest tenth.



[A] 3.4 [B] 8.4 [C] 7.7 [D] 6.4

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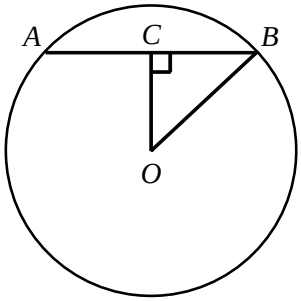
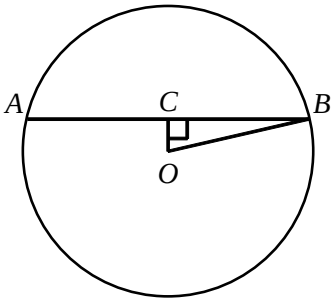
5. Given ⊙O with radius 5 and $OC = 3$. Find the length of $\overline{AB}$.



6. Given ⊙O with radius 41 and $OC = 9$. Find the length of $\overline{AB}$.



7. A footbridge is in the shape of an arc of a circle. The bridge is 10 ft tall and 21 ft wide. What is the radius of the circle that contains the bridge? Round your answer to the nearest tenth.

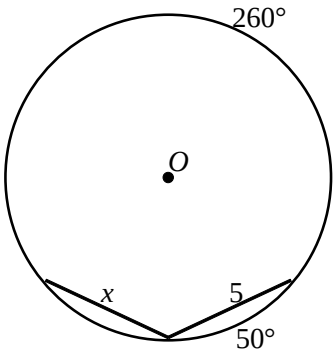
[A] 10.5 ft [B] 0.5 ft

[C] 21.0 ft [D] 11.0 ft

8. Assume the Earth is a sphere with radius 4000 miles. A tunnel 200 miles long connects two points A and B on the Earth's surface. A ventilation shaft is constructed to the surface at the center of the tunnel. How long is the shaft?

9. A plane intersects a sphere 20 in. from its center, forming circle M with radius 21 in. What is the radius of the sphere?

10. Find the value of x to the nearest tenth.



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[1] C

[2] C

[3] B

[4] D

[5] 8

[6] 80

[7] A

[8] about 1.25 mi

[9] 29 in.

[10] 5