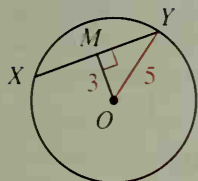


Written Exercises

In the diagrams that follow, O is the center of the circle.

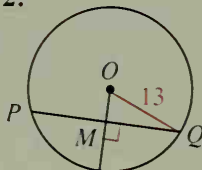
A

1.



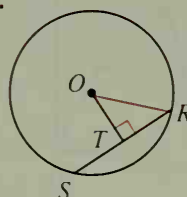
$$XY = \underline{\quad? \quad}$$

2.



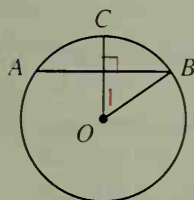
$$PQ = 24; OM = \underline{\quad? \quad}$$

3.



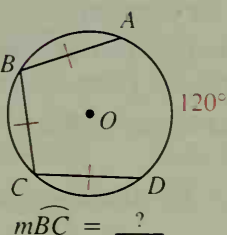
$$OT = 9; RS = 18 \\ OR = \underline{\quad? \quad}$$

4.



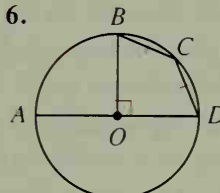
$$m\widehat{ACB} = 110; \\ m\angle 1 = \underline{\quad? \quad}$$

5.



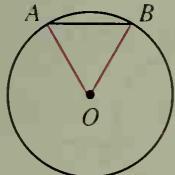
$$m\widehat{BC} = \underline{\quad? \quad}$$

6.



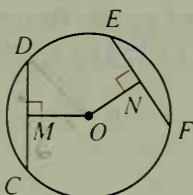
$$m\widehat{CD} = \underline{\quad? \quad}$$

7.



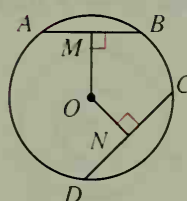
$$m\angle AOB = 60; \\ AB = 24; OA = \underline{\quad? \quad}$$

8.



$$OM = ON = 7; \\ CM = 6; EF = \underline{\quad? \quad}$$

9.



$$AB = 18; OM = 12; \\ ON = 10; CD = \underline{\quad? \quad}$$

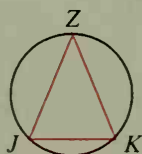
10. Sketch a circle with two noncongruent chords. Is the longer chord farther from the center or closer to the center than the shorter chord?

11. Sketch a circle O with radius 10 and chord \overline{XY} 8 cm long. How far is the chord from O ?

12. Sketch a circle Q with a chord \overline{RS} that is 16 cm long and 2 cm from Q . What is the radius of $\odot Q$?

13. Sketch a circle P with radius 5 cm and chord \overline{AB} that is 2 cm from P . Find the length of \overline{AB} .

14. Given: $\widehat{JZ} \cong \widehat{KZ}$
Prove: $\angle J \cong \angle K$



15. Prove the converse of Exercise 14.