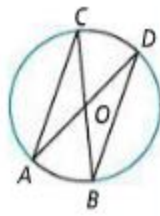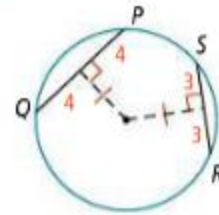In $\odot O$, $m\overarc{CD} = 50$ and $\overline{CA} \cong \overline{BD}$.

1. What is $m\overarc{AB}$? How do you know?

2. What is true of $\overline{CA}$ and $\overline{BD}$? Why?

3. Since $CA = BD$, what do you know about the distance of $\overline{CA}$ and $\overline{BD}$ from the center of $\odot O$?

4. **Vocabulary** Is a radius a chord? Is a diameter a chord? Explain your answers.

5. **Error Analysis** What is the error in the diagram?
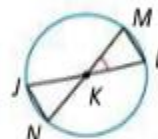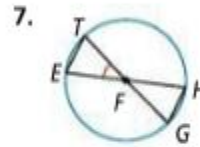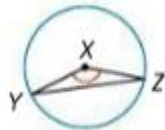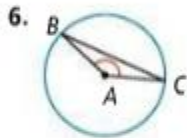
Practice and Problem-Solving Exercises
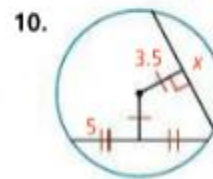
MATHEMATICAL PRACTICES
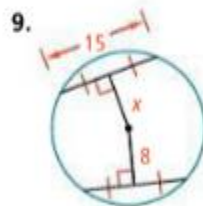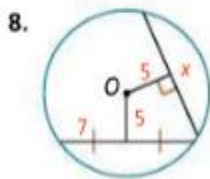
Practice

In Exercises 6 and 7, the circles are congruent. What can you conclude?
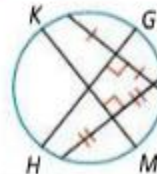
See Probl

6.

7.

Find the value of x.

See Probl

8.

9.

10.

11. In the diagram at the right, $\overline{GH}$ and $\overline{KM}$ are perpendicular bisectors of the chords they intersect. What can you conclude about the center of the circle? Justify your answer.

See Problems 3 a

12. In $\odot O$, $\overline{AB}$ is a diameter of the circle and $\overline{AB} \perp \overline{CD}$. What conclusions can you make?