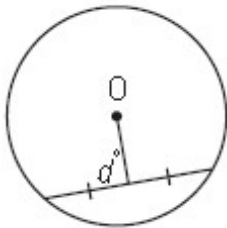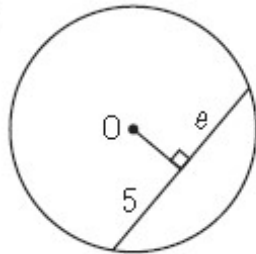**3.** Point O is the centre of each circle.
Determine the values of $d°$, e, and f.
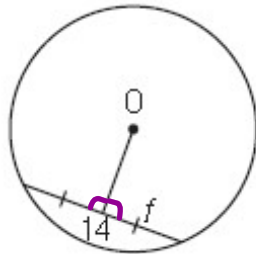
a)

b)

c)

4. Point O is the centre of each circle.
Determine each value of $x°$ and $y°$.

a)

b)

c)

5. Point O is the centre of each circle.
Determine each value of a and b.

a)

b)

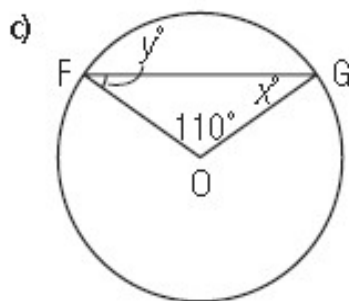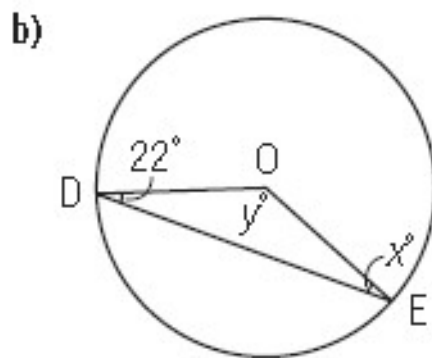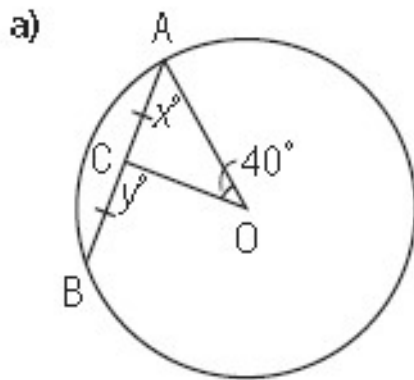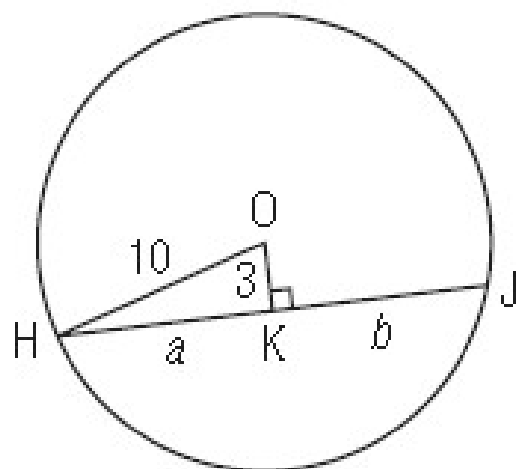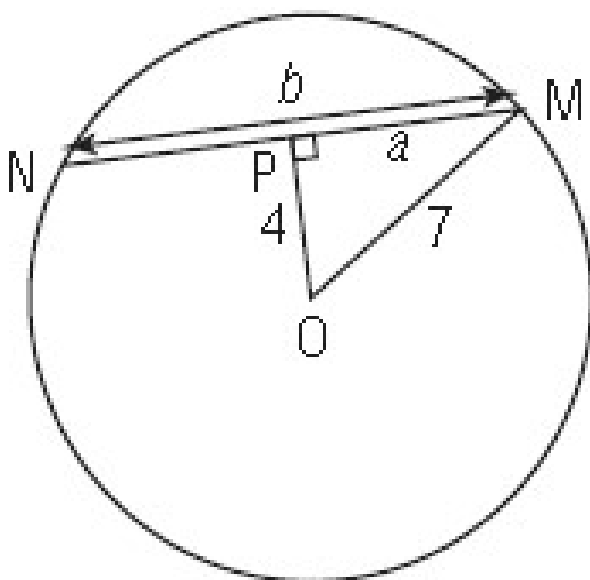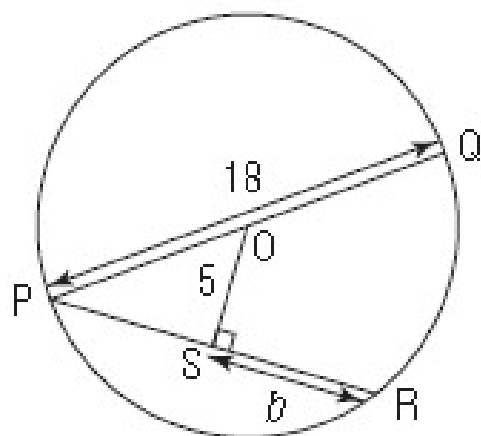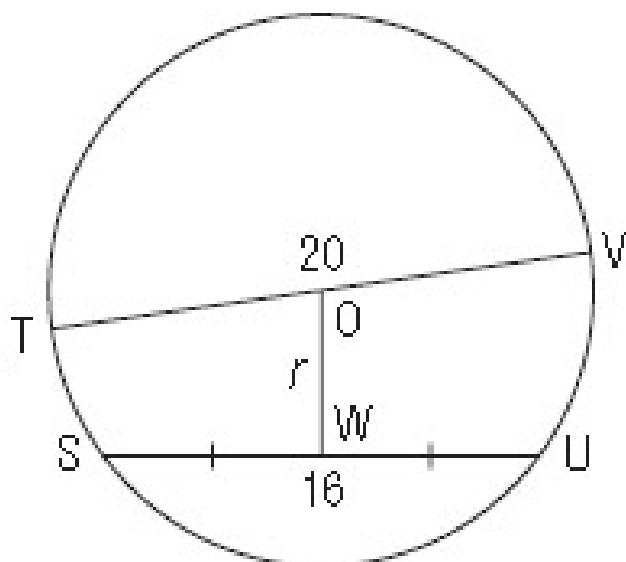**6.** Point O is the centre of the circle. Determine the value of b. Which circle properties did you use?
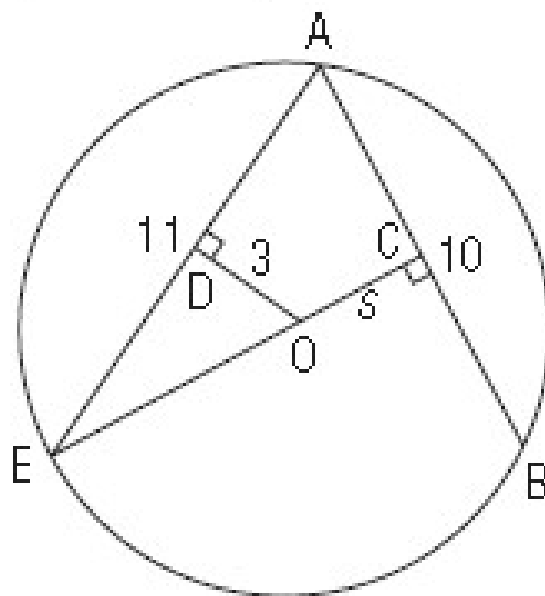
7. Point O is the centre of each circle.
Determine each value of r. Which extra line
segments do you need to draw first?
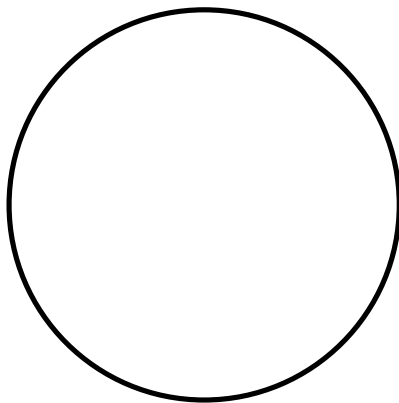Justify your solutions.

b)

10. Point O is the centre of each circle. Determine each value of s. Which circle properties did you use?
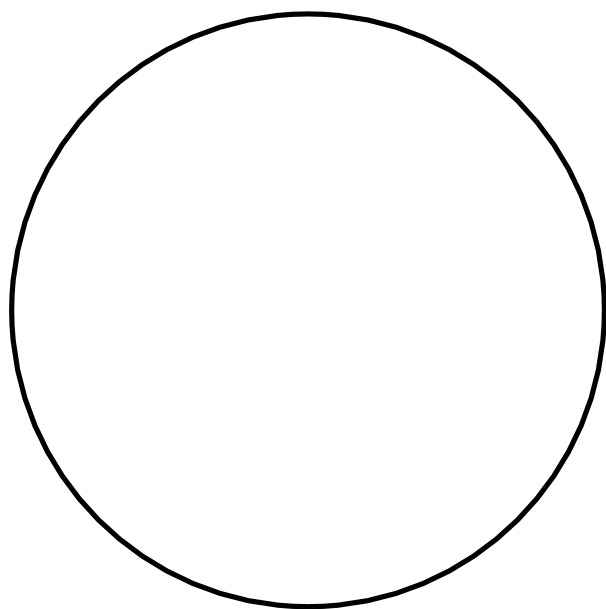
a)

Do the yellow and then blue

11. A circle has diameter 25 cm. How far from the centre of this circle is a chord 16 cm long? Justify your answer.

The only reason they give you diameter is so you can use the radius

14. A chord is 6 cm long. It is 15 cm from the centre of a circle. What is the radius of the circle?

15. A circle has diameter 13 cm. In the circle, each of two chords is 8 cm long.

    a) What is the shortest distance from each chord to the centre of the circle?

    b) What do you notice about these congruent chords?