Name _____ Class _____ Date _____

Assume that lines that appear to be tangent are tangent. *C* is the center of each circle. Find the value of *x*.

1.

2.

3.
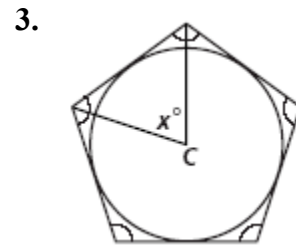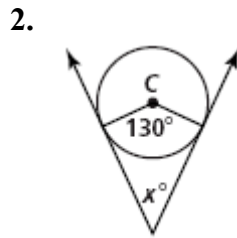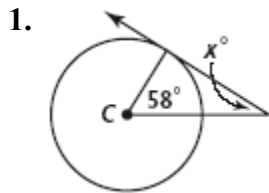
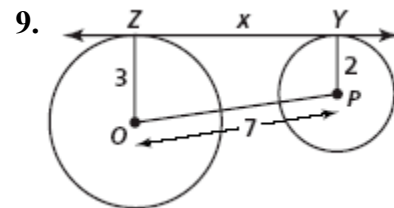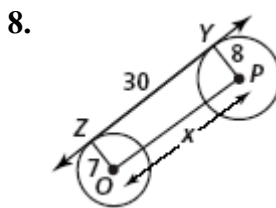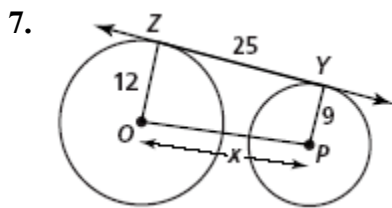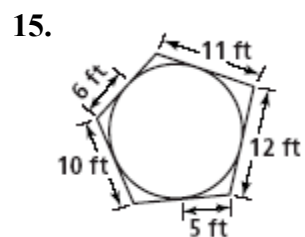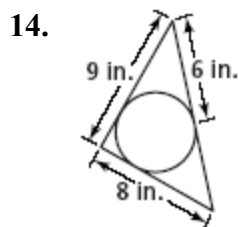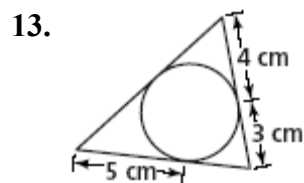**In each diagram, $\overrightarrow{AB}$ is tangent to $\odot C$ at *B*. Find the value of *x*.**
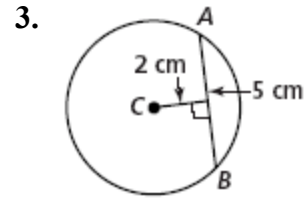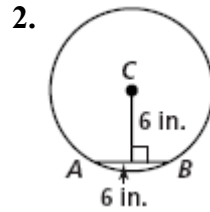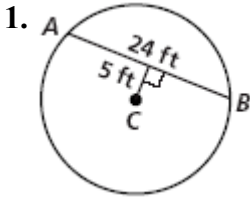
4.

5.

6.
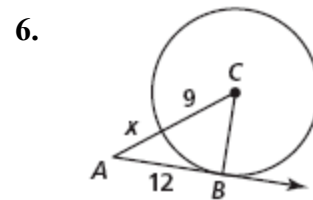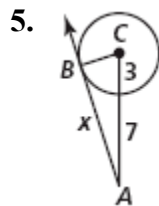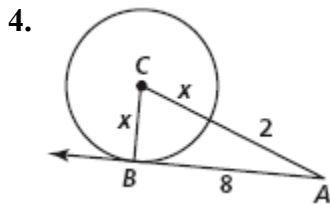
In each diagram, $\overleftrightarrow{ZY}$ is tangent to circles *O* and *P*. Find the value of *x*.

7.

8.

9.

In each diagram, a polygon circumscribes a circle. Find the perimeter of each polygon.

13.

14.

15.

Find the radius and $m\overset{\frown}{AB}$.

1.

24 ft
5 ft
A
B
C

2.

C
6 in.
A
B
6 in.

3.

A
2 cm
5 cm
C
B

Find the value of x to the nearest tenth.

4.

C
x
5
8

5.

x
2
C
3

6.

C
7   7
3   x
3   x

7.

C
12
x
120°

8.

x C
20
86°

9.

x
6
C