SM2H - Unit 6 Circle Review   Name_____

Identify a line or segment in Circle *K* that is described by each term:

1.   Chord   4.   tangent

2.   Secant   5.   radius
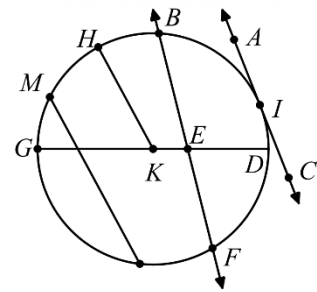
3.   diameter

$\overline{AC}$ and $\overline{BD}$ **are diameters. Find the indicated measure**

6. $m\widehat{DC}$ 8. $m\widehat{BC}$

7. $m\widehat{BEC}$ 9. $m\widehat{ED}$
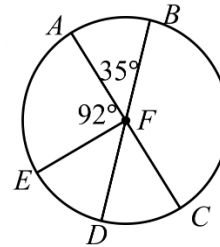
Find the value of the variable(s). Give a REASON.

10.

11.
18
$4x - 6$

12.
B
$11x°$
C
A
D
$110°$

7
x

13.
D
$70°$
E
$(3x - 5)°$
A

14.
$x°$
$y°$
$96°$
$84°$

15.
$62°$
$y°$
$x°$

16.
15
10
x
4

17.
C
$x°$
$66°$
B

18.
A
$x°$
B
$52°$
C

19.

20.

21.
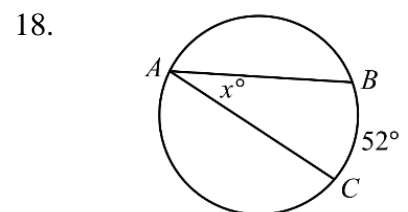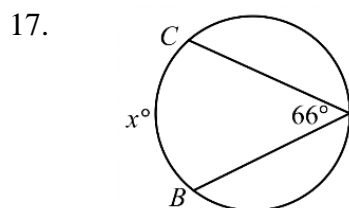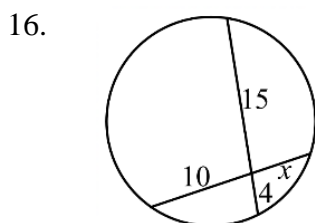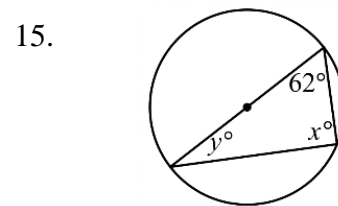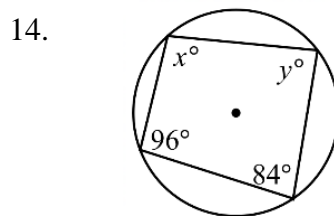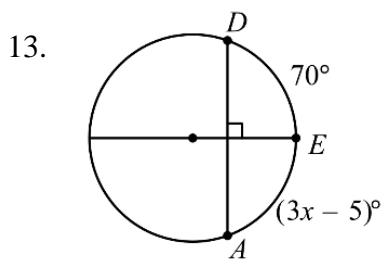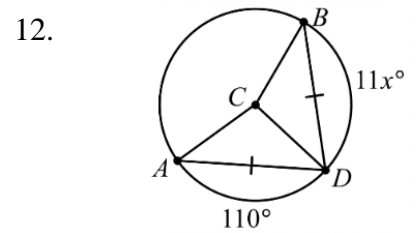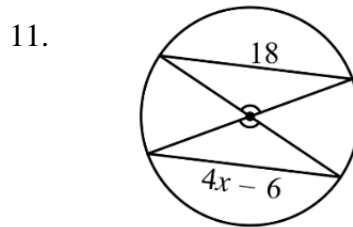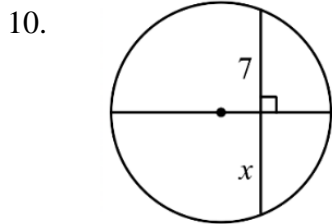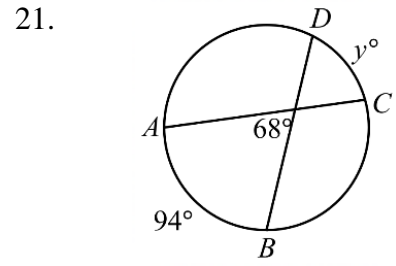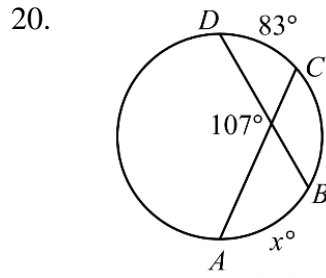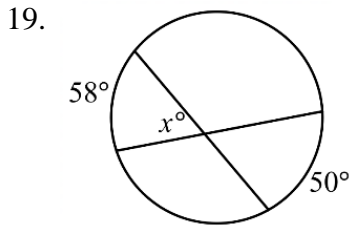
Name any congruent arcs or chords. State the <u>REASON</u> they are congruent.

22.

23.

24.

25.
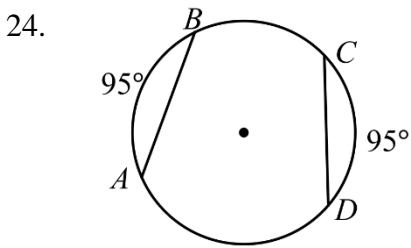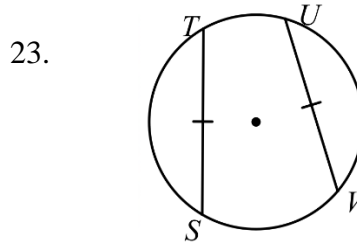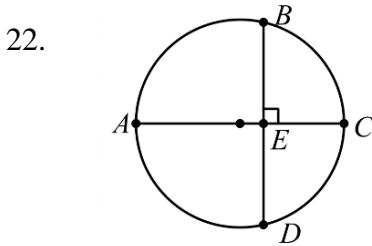
Write the standard equation of the circle with the given center and radius

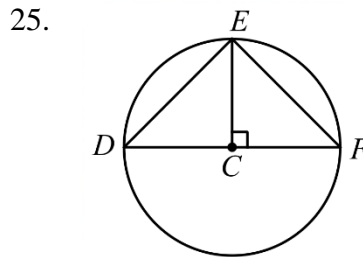26. Center $(0,0)$; Radius 4

27. Center $(5, -7)$; Radius 9

Give the radius and coordinates of the center of each circle. Graph the circle.

28. $(x + 3)^2 + (y - 1)^2 = 4$

29. $(x + 1)^2 + (y - 6)^2 = 13$

30. $x^2 - 8x + y^2 = 9$

Find the measure of the arc or central angle indicated. Asume lines that appear to be diameters are actual diameters.
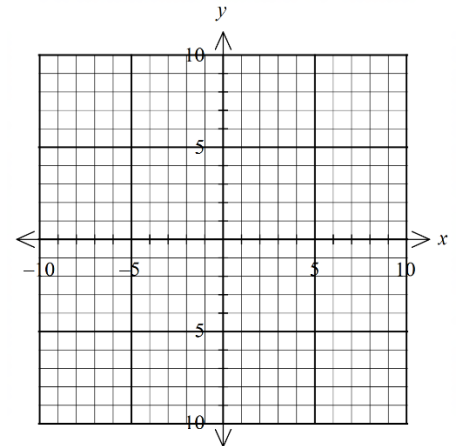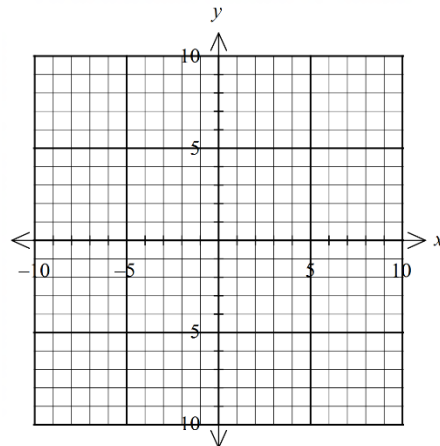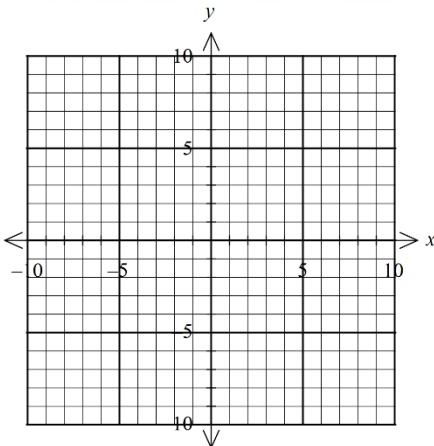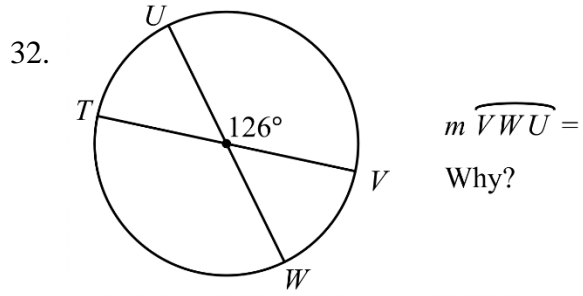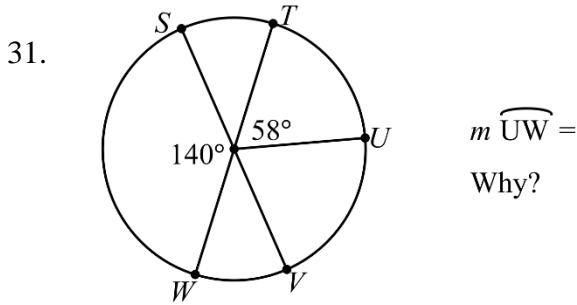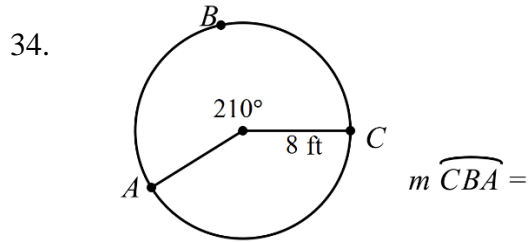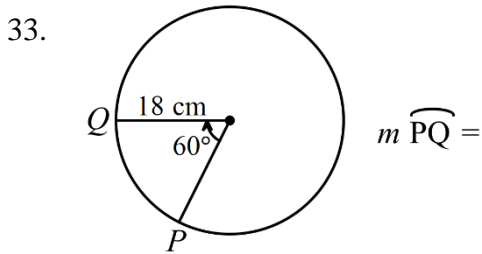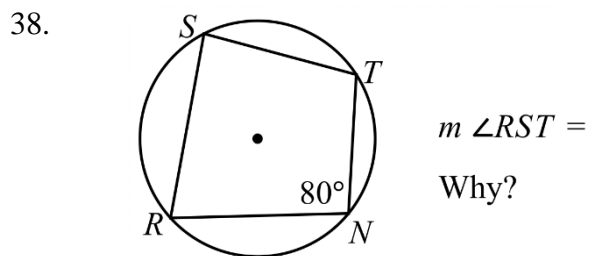
31.

$m \ \overset{\frown}{UW} =$

Why?

32.

$m \ \overset{\frown}{VWU} =$

Why?

Find the length of each arc. Round your answer to the nearest hundredth.

33.

18 cm
60°

$m \ \overset{\frown}{PQ} =$

34.

210°
8 ft

$m \ \overset{\frown}{CBA} =$

Find the measure of the arc or angle indicated.

35.

68°

$m \ \overset{\frown}{KL} =$

Why?

36.

114°

$m \ \angle LMK =$

Why?

37.

102°

$m \ \angle TSR =$

Why?

38.

80°

$m \ \angle RST =$

Why?
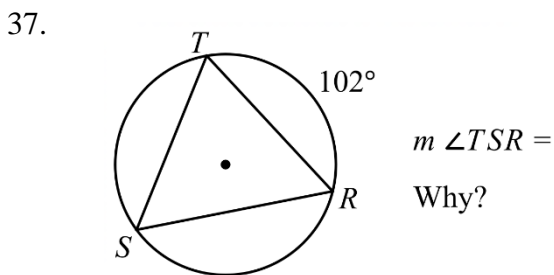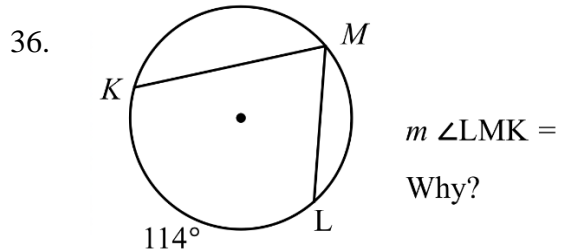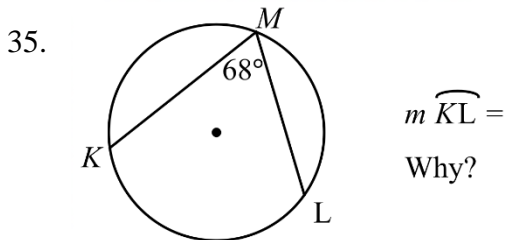
Find the segment length indicated. Assume lines which appear to be tangent are tangent.

39.

$\overline{AB} = 5.8$

$\overline{AC} = 4.2$

$\overline{BC} =$

40.

$\overline{ST} = 12$

$\overline{SR} = 9$

$\overline{TR} =$
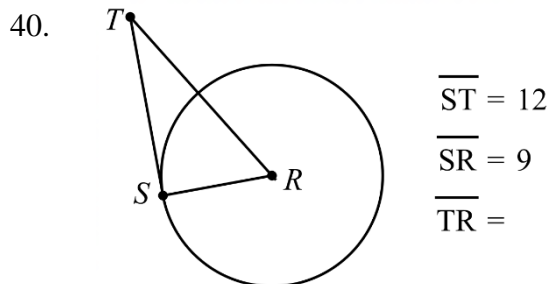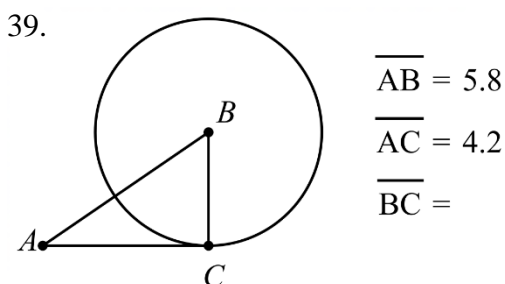
Solve for x. Assume lines that appear to be tangent are tangent. Give a <u>REASON</u> for your equation.

41.

$x + 1$

$2x - 11$

42.

$3x$

$-7 + 4x$

43.

x

5

8

10

44.

12

9

$x + 1$

$x - 1$
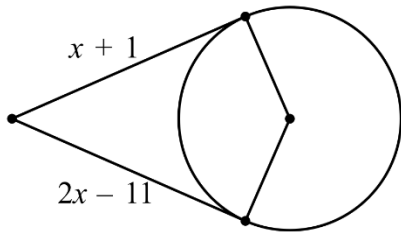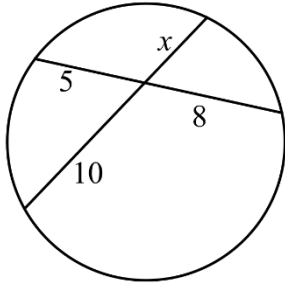
Determine if line AB is tangent to the circle. State a <u>REASON</u>.

45.

$\overline{AB} = 11.2$

$\overline{BC} = 8.4$

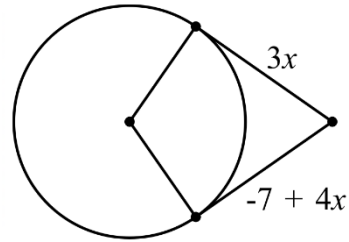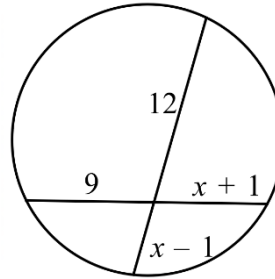$\overline{AC} = 14$

C

A

B

46.

$\overline{AC} = 9.8$

$\overline{CB} = 18$

$\overline{BA} = 14.4$

A

C

B
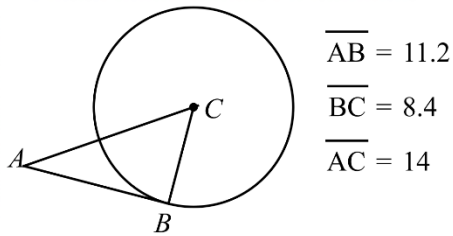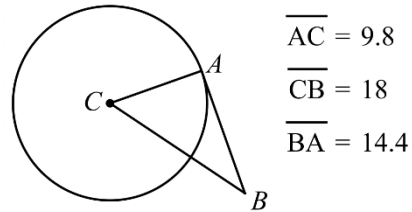
Find the value of x. Assume lines that appear to be tangent are tangent.

47.

$158°$

D

E

C

S

$62°$

F
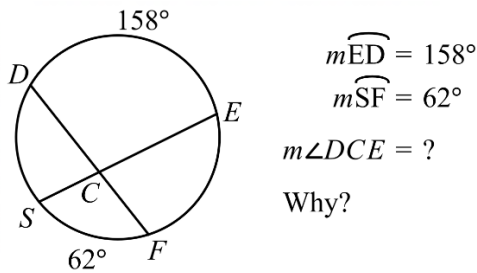
$m\widehat{ED} = 158°$

$m\widehat{SF} = 62°$

$m\angle DCE = ?$

Why?

48.

N

$60°$

D

K

M

L
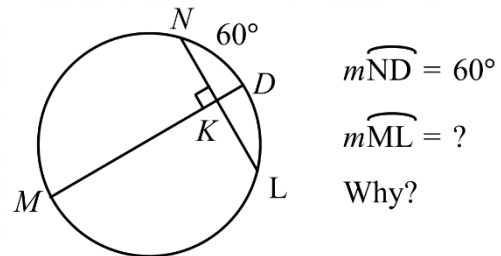
$m\widehat{ND} = 60°$

$m\widehat{ML} = ?$

Why?

Find the measure of the indicated arc or angle. State a Reason.

49.

65 ° — U

?

T   V

Why?

50.

C

?→

D

B   60 °
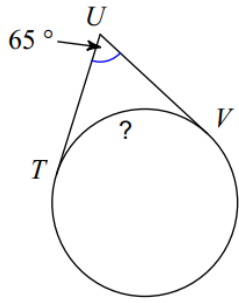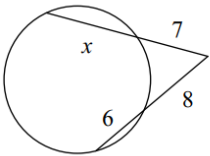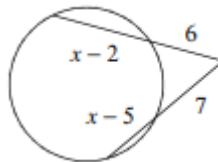
K

A

160 °
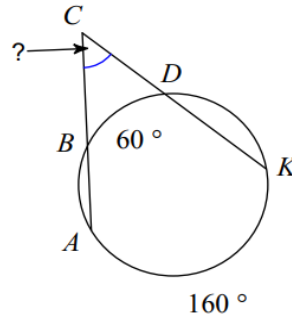
Why?

Solve for x. State a Reason.

51.

7

x

8

6

Why?

52.

6

x − 2

x − 5   7

Why?

53.

x

6

5

Why?

$\overline{FG}$ is tangent to circle C

$\overline{AD}$ is a diameter of circle C

$m\overset{\frown}{ED} = 58°$

$m\angle BCD = 66°$

$m\overset{\frown}{BD} =$
why?

$m\angle BAD =$
why?

$m\angle AED =$
why?

$m\angle DAE =$
why?

$m\angle EDA =$
why?

$m\overset{\frown}{AE} =$
why?

$m\overset{\frown}{AB} =$
why?

$m\angle CBF =$
why?

$m\angle BCA =$
why?

$m\angle CBA =$
why?

$\overline{AE} = 3$
$\overline{ED} = 5$
$\overline{EC} = 7$

$m\overset{\frown}{AB} = 70°$
$m\overset{\frown}{DC} = 140°$

$m\angle AEB =$
why?

$m\angle AED =$
why?

$m\,\overline{EB} =$
why?