Name _____

FOM 3 Unit 6: Circles
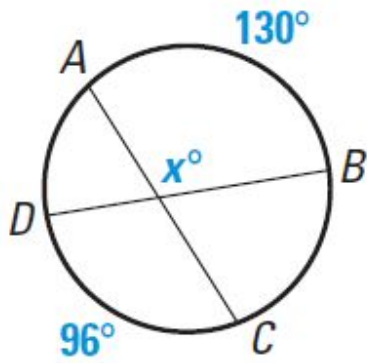
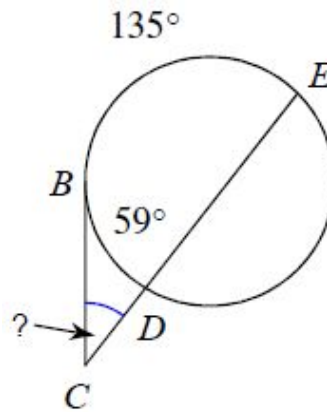| Monday	Tuesday	Wednesday	Thursday	Friday
			November 7 ● Arcs and angles of circles HW: worksheet 6.1	**November 8** ● Lengths with circles HW: worksheet 6.2
November 11 ● No school - Veterans Day	**November 12** ● QUIZ!! ● Equation of a circle HW: worksheet 6.3	**November 13** ● Equation of a circle with completing the square HW: worksheet 6.4	**November 14** ● Arc length and area of sector HW: worksheet 6.5	**November 15** ● Practice HW: finish practice
November 18 ● Review HW: finish review	**November 19** ● TEST!!			

6.1 - Arcs and Angles Formed by Secants, Tangents, and Chord
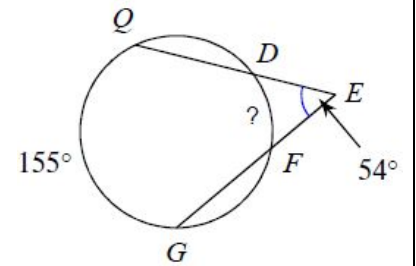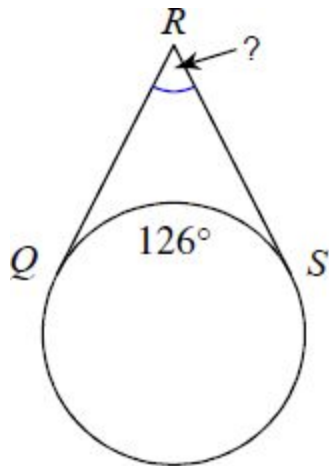
Determine the value of x.

1

130°

A

x°

B

D

96°

C

2

135°

E

B

59°

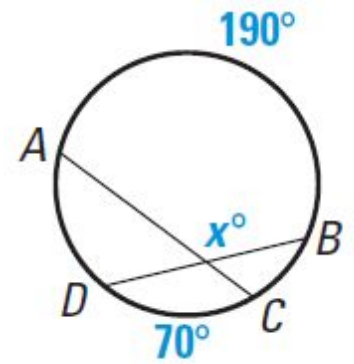D

?→

C

3

Q

D

E

?

155°

F

54°

G

4

R

?

Q

126°

S

5

130°

J

T

?

K

M

45

L

6

190°

A

x°

B

D

70°

C

7

K ?
J
L
240°

8

B
C
x° 72° 99°
A
D

9

K
L ?
60° J
M
160°

10
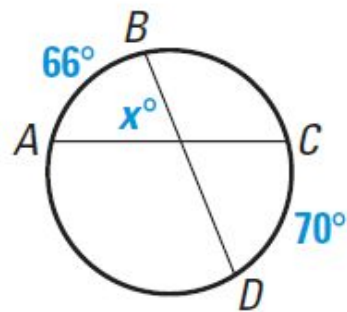

173°
T
W 61°
? U
V
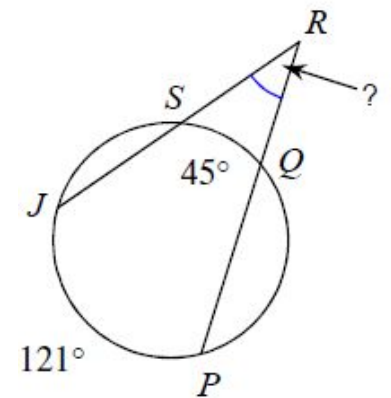
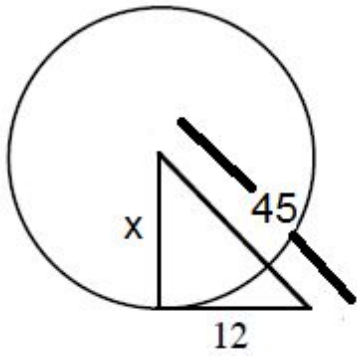**11**

66° B
x°
A C
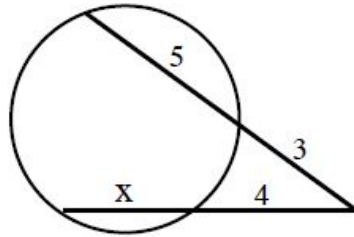70°
D

12

R
S ?
45° Q
J
121°
P
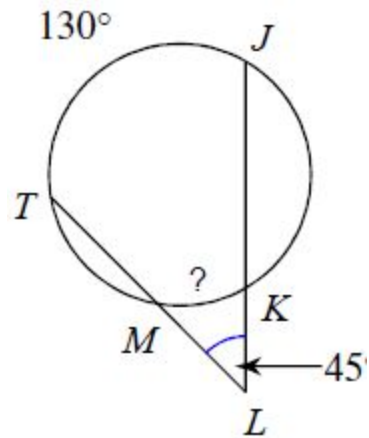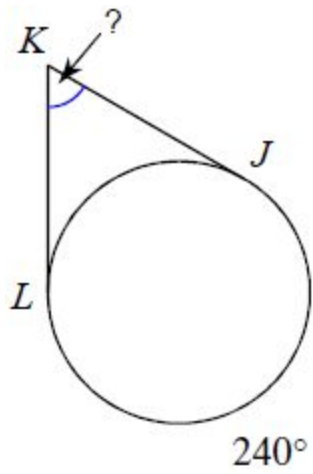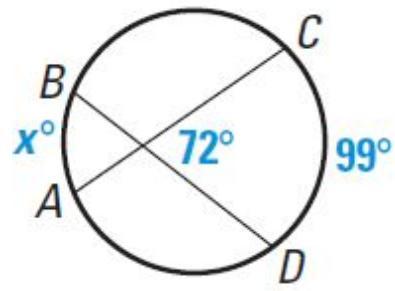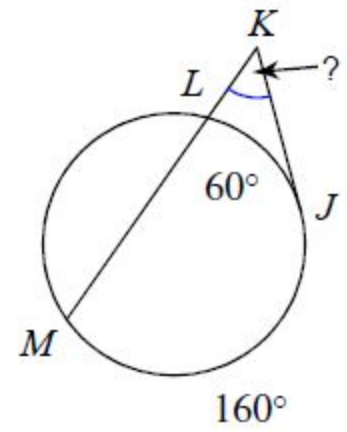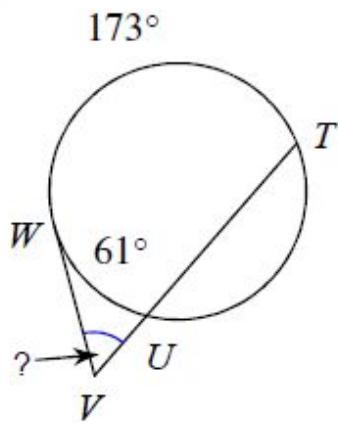
6.2 - Lengths with Secants, Tangents, Chords, and Radii

Determine the value of x.

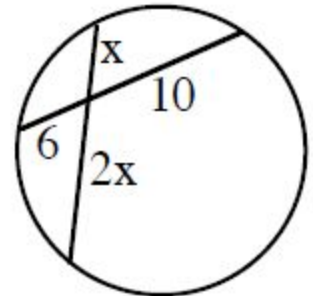|		
1	**2**	**3**
x, 45, 12	5, x, 3, 4	4, x, 5
4	**5**	**6**
30, 25, x	x, 10, 20	x, 10, 6, 2x

7	8	9
3x 5 10	11 4 x 2	12 5 x
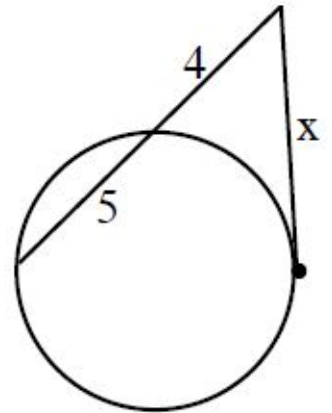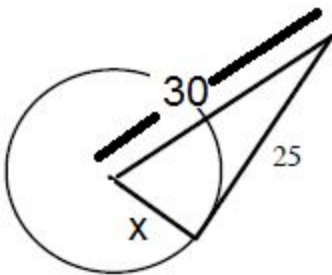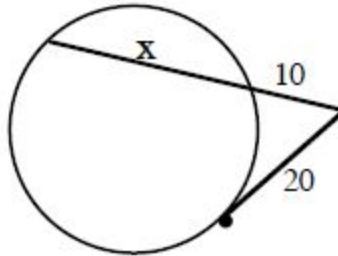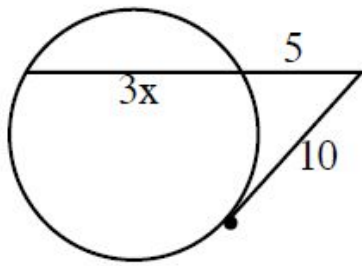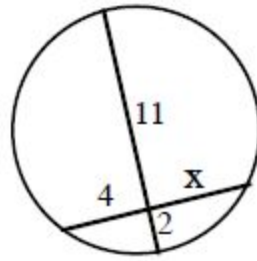
10	11	12
x 3x 2 6	3 6 x 12	x 4 9 3

6.3 - Equation of a Circle

Write the equation of the circle with the given information.

1. center: $(4,-8)$
   radius: 5

2. center: $(-3,-2)$
   radius: 2
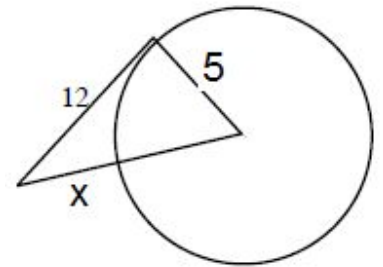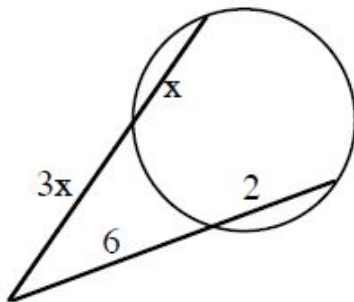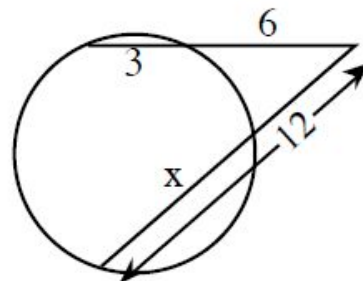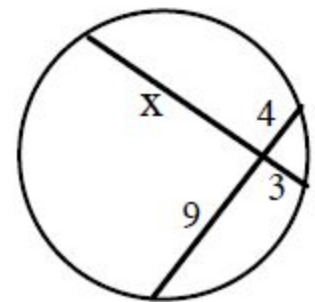
3. center: $(5,10)$
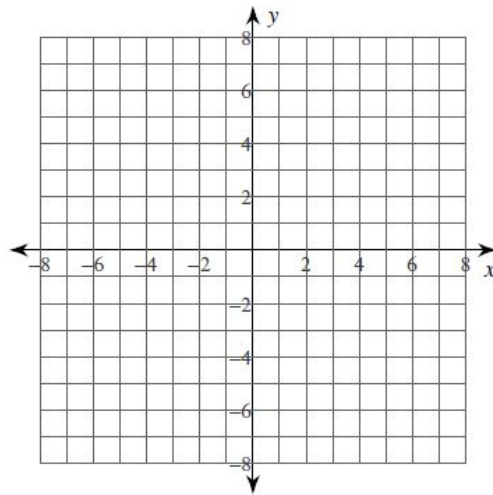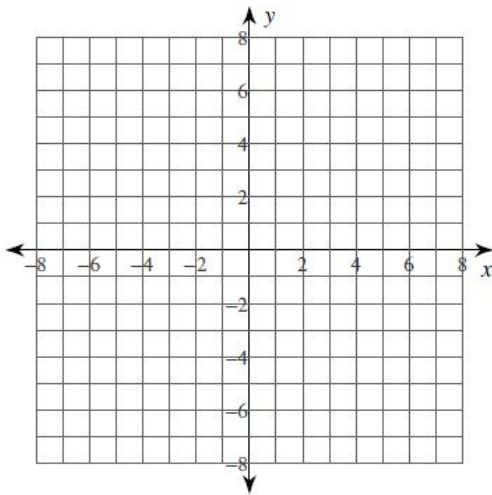   radius: 4

4. center: origin
   radius: 12

5. center: $(-11,8)$
   radius: 1

6. center: $(0,12)$
   radius: 14

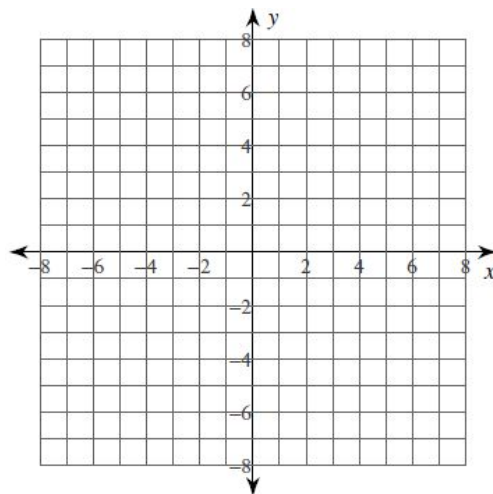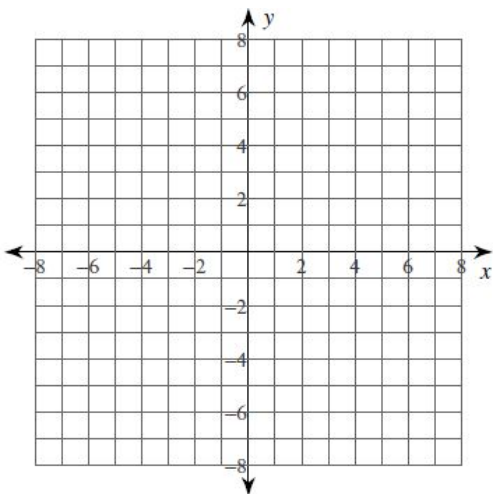*Determine the center and radius of each circle. The graph the circle.*

7. Graph: $(x-1)^2 + (y+3)^2 = 4$

8. Graph: $(x+2)^2 + (y-1)^2 = 16$

9. Graph: $(x-1)^2 + (y-4)^2 = 9$

10. Graph: $x^2 + (y-3)^2 = 1$

6.4 - Equation of a Circle with Completing the Square

Determine the equation of the circle in standard form. Then determine the center and radius of the circle.

1. $x^2 + y^2 + 4x - 16y + 52 = 0$

2. $x^2 + y^2 + 2x + 18y + 1 = 0$

3. $x^2 + y^2 - 14x - 2y - 50 = 0$

4. $x^2 + y^2 - 10x + 10y + 48 = 0$

5. $x^2 + y^2 + 18x + 17 = 0$

6. $x^2 + y^2 + 6x - 12y + 18 = 0$

6.5 - Arc Length and Area of a Sector

1. radius = 7 ft, central angle = 18°
   Find arc length.

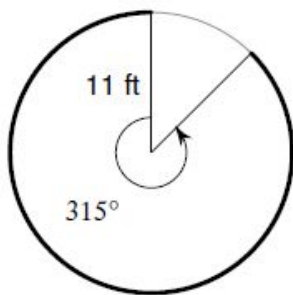2. radius = 2 in, central angle 240°
   Find area of sector.

3. area of sector = 30π in^2, radius = 6 in
   Find central angle

4. area of sector = 116π cm^2, central angle = 110°
   Find diameter.
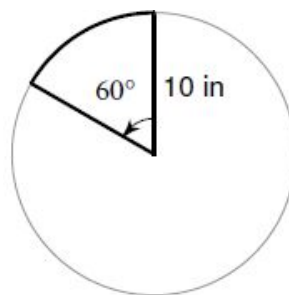
5. central angles = 130°, arc length = 14 cm
   Find radius.

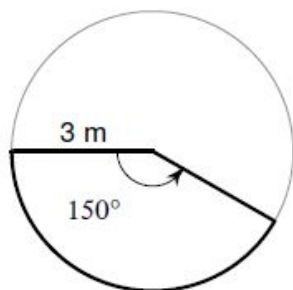6. arc length = 8π cm, radius = 20 cm
   Find central angle.

7. Determine the arc length.

11 ft

315°

8. Determine the area of sector.

60° 10 in

9. Determine the area of sector.

3 m

150°

10. Determine the arc length.

240°

16 ft