Name _____

Math 3 Unit 7: Circles

SQUARES AND TRIANGLES AGREE
CIRCLES ARE POINTLESS

	November 12	November 13	November 14	November 15
	● Arc length and area of sector HW: 7.1	● Equation of a circle HW: 7.2	● Inscribed angles HW: 7.3	● Chords HW: 7.4
November 18 ● QUIZ!! ● Tangents HW: 7.5	**November 19** ● Angles formed by secants, tangents, and chords HW: 7.6	**November 20** ● Lengths formed by secants, tangents, and chords HW: 7.7	**November 21** ● Review for test HW: finish review	**November 22** ● TEST!!!

7.1 - Arc Length and Area of a Sector

Find each requested measurement.

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

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

3. central angles = 130°, arc length = 14 cm
    Find radius.

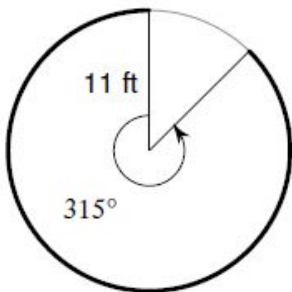4. area of sector = 116π cm², central angle = 110°
    Find diameter.

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

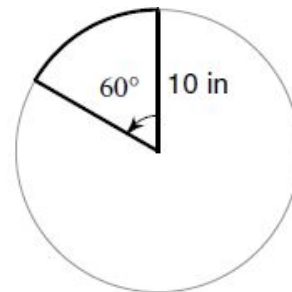6. radius = 2 m, central angle = 103°
    Find arc length.

7. area of sector = 17π cm², central angle = 75°
    Find radius.

8. circumference = 4π in, central angle = 87°
    Find area of sector.

9. Find area of sector.

10. Find arc length.

7.2 - Equation of a Circle

For #1 − 4, determine the equation of a circle with the given center and radius.

1. center: $(-7,\ 2)$; radius = 5 in

2. center: $(-5,\ -6)$; radius = 3 ft

3. center: $(0,\ 7)$; radius = $\sqrt{13}$ km

4. center: $(1,\ 14)$; radius = 36 cm

5. Find the equation of a circle with center point $(-1,\ 4)$ and containing the point $(5,\ -4)$.

For #6 − 9, determine the equation of a circle in standard form. Then determine the center and radius.

6. $x^2 + y^2 - 10x + 8y - 56 = 0$

7. $x^2 + y^2 - 14x + 4y + 35 = 0$

8. $x^2 + y^2 - 2x + 6y - 3 = 0$

9. $x^2 + y^2 + 12x - 45 = 0$

7.3 - Inscribed Angles

Find the value of each variable. For each circle, the dot represents the center.

1.

42°
b°
a°
c°
84°

2.

a°
17°

3.

c°
a°
114°
92°
b°
d°
108°

4.

a°
b°
76°

5.

122°
b°
a°
c°

6.

b°
a°
78°
87° 36°
c°

7.

a°
256°

8.

224°
b°
a°

9.

b°
a°
144°
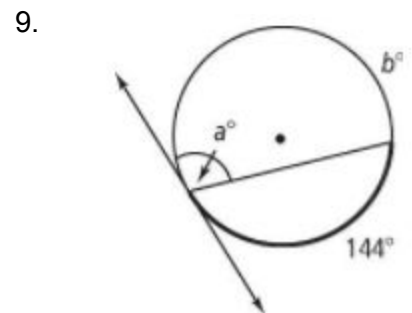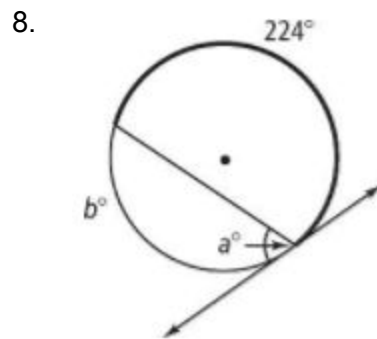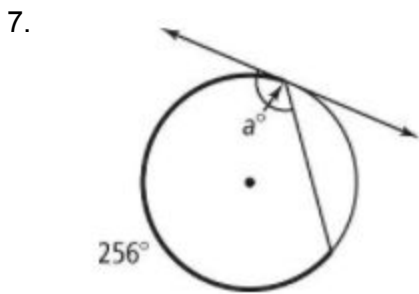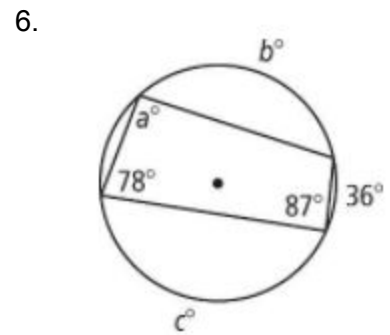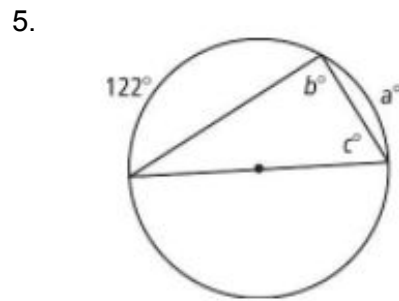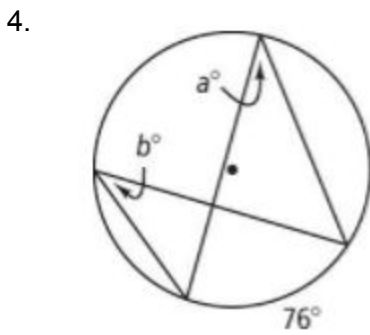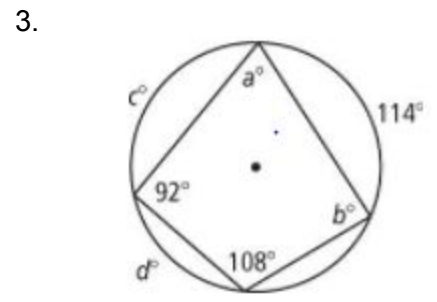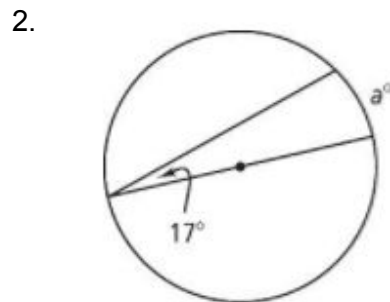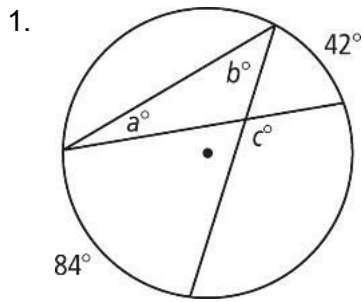
Find each indicated measure for ⊙ M.

10. m∠B

11. m∠C

12. m$\overset{\frown}{BC}$

13. m$\overset{\frown}{AC}$

86°
A
B
51°
• M
C
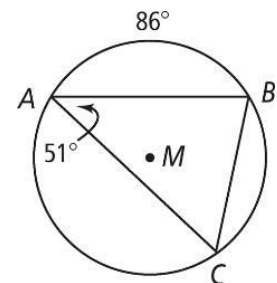
7.4 - Chords

Solve for the variable.

1.
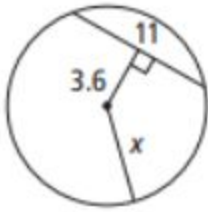
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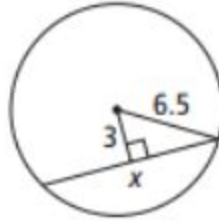
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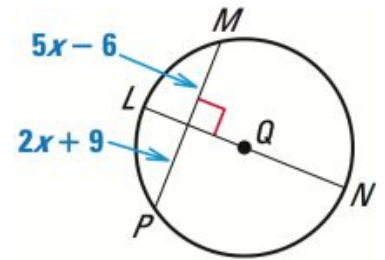
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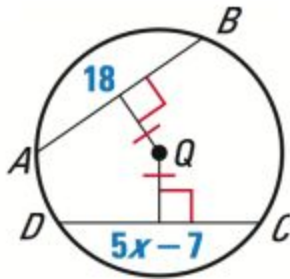
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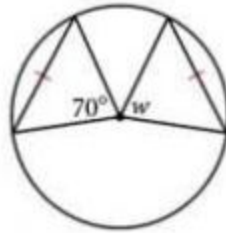
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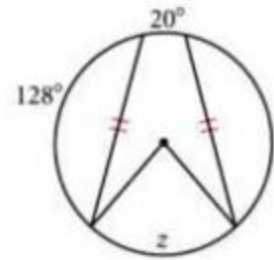
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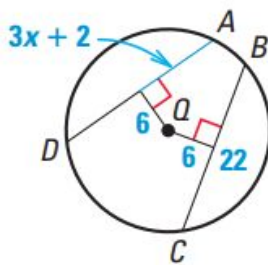
8.
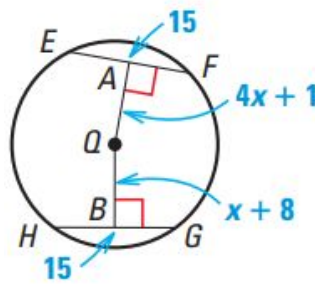
7.5 - Tangents

Determine if line AB is tangent to the circle.
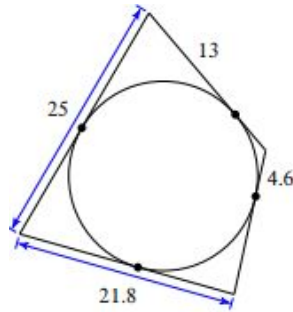
1.
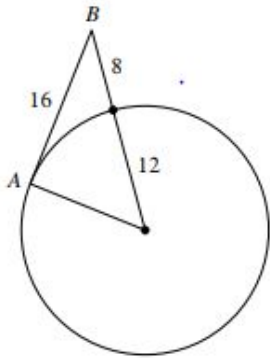
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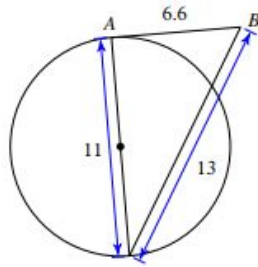
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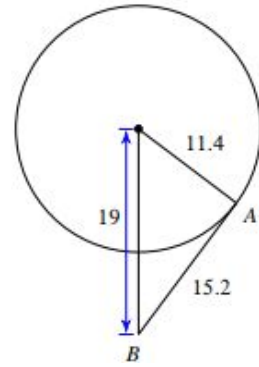
Determine the perimeter of each polygon. Assume lines that appears tangent is tangent.
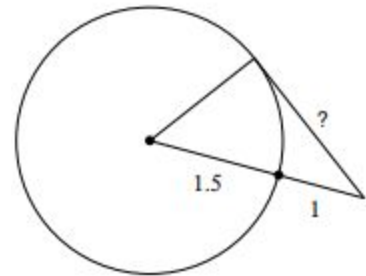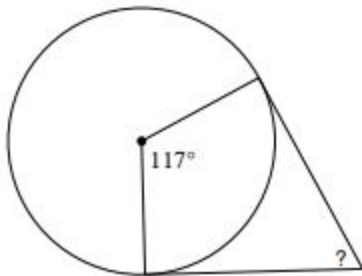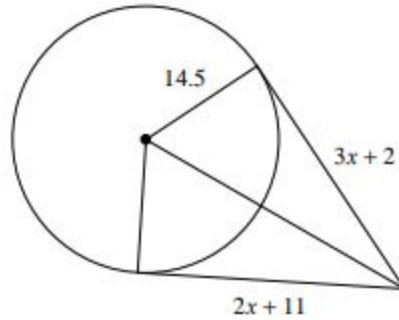
4.
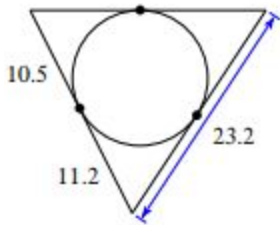
5.

6.

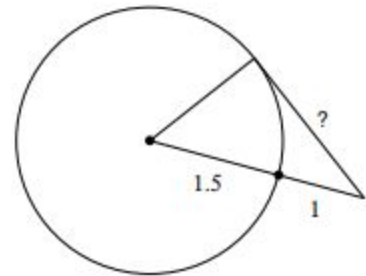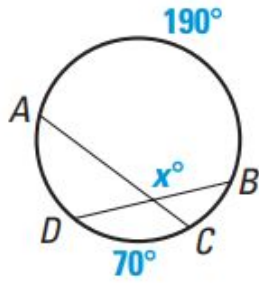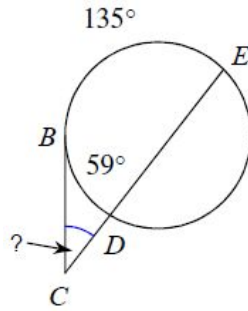*Find the indicated side and angle measures. Assume lines that appears tangent is tangent.*

7.

8.

9.

7.6 - Angles Formed By Secants, Tangents, and Chords
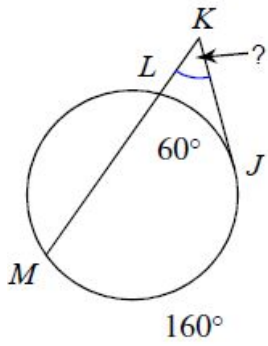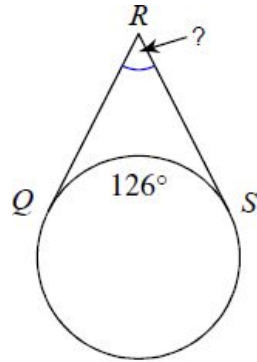
Solve for x.

1.

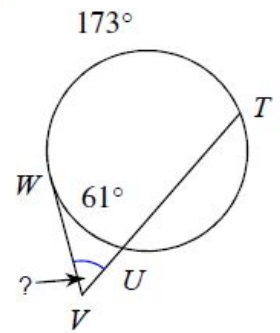190°

A

$x°$

B

D

C

70°

2.

135°

E

B

59°

? → D

C

3.

130°

J

T

?

K

M

45

L

4.

K

?

L

60°

J

M

160°

5.

R

?

126°

Q

S

6.

173°

T

W

61°

? →

U

V

7.

B

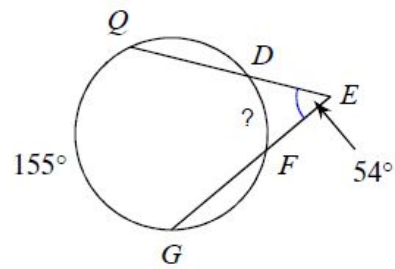66°

$x°$

A

C

70°

D

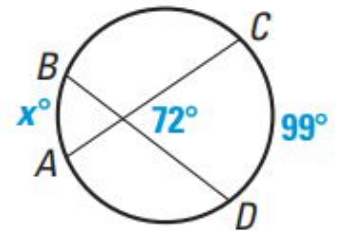8.

Q

D
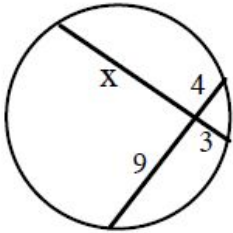
E

?

155°

F

54°

G

9.
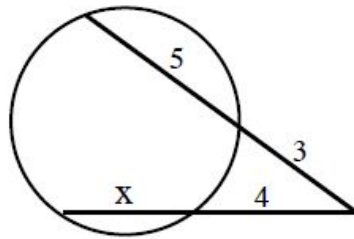
C

B

$x°$

72°

99°

A

D
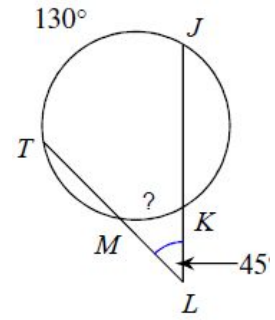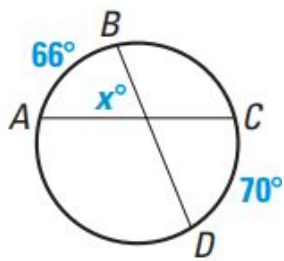
7.7 - Lengths with Secants, Tangents, and Chords

Determine the value of x.

1.

2.

3.

4.

5.

6.

7.

8.

9.