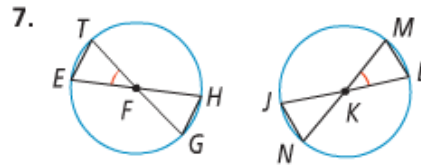
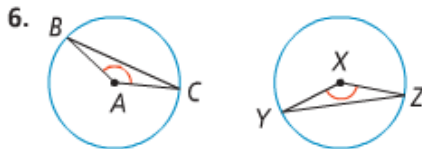


Pg. 776 HW Answers

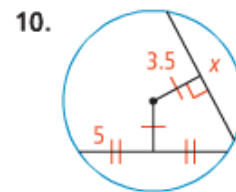
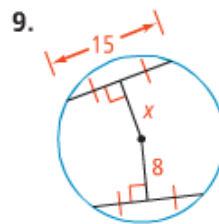
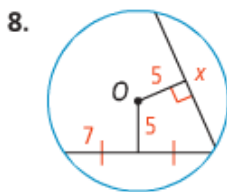
In Exercises 6 and 7, the circles are congruent. What can you conclude?

← See Problem 1.

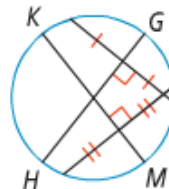


Find the value of x .

← See Problem 2.

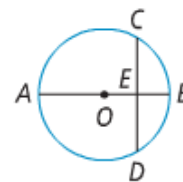


11. In the diagram at the right, \overline{GH} and \overline{KM} are perpendicular bisectors of the chords they intersect. What can you conclude about the center of the circle? Justify your answer.

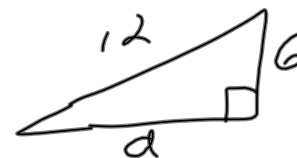
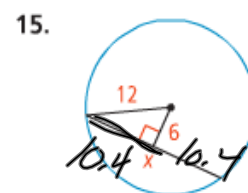
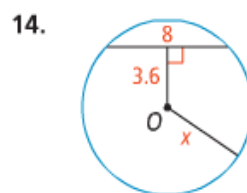
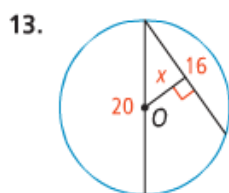


← See Problems 3 and 4.

12. In $\odot O$, \overline{AB} is a diameter of the circle and $\overline{AB} \perp \overline{CD}$. What conclusions can you make?



Algebra Find the value of x to the nearest tenth.



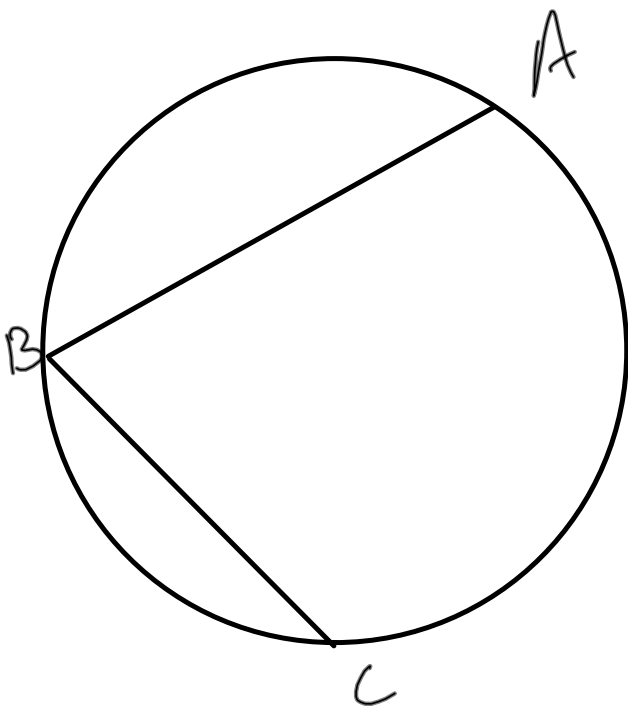
$$6^2 + a^2 = 12^2$$

$$a = \sqrt{12^2 - 6^2}$$

$$a = 10.4 \times 2$$

12.3 Inscribed Angles

inscribed - inside a circle



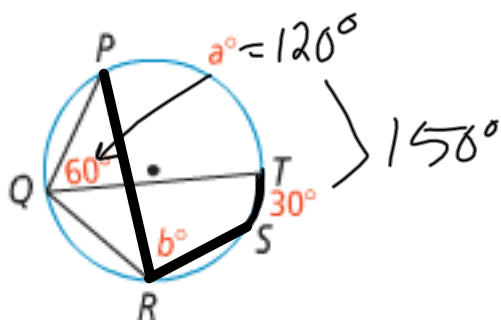
inscribed angle:

an angle whose vertex is on a circle and sides are chords ($\angle ABC$)

intercepted arc:

the arc whose endpoints are the endpoints of an inscribed angle (\widehat{AC})

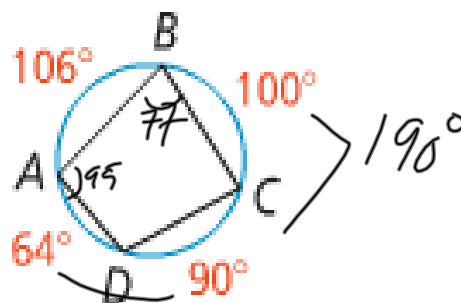
12.3 Inscribed Angles



Find a , b .

$$a = 2 \times 60 = 120^\circ$$

$$b = \frac{1}{2}(150) = 75^\circ$$



Find $\angle A$, $\angle B$, $\angle C$, $\angle D$

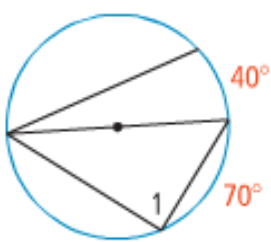
$$\angle A = \frac{1}{2}(190) = 95^\circ$$

$$\angle B = \frac{1}{2}(154) = 77^\circ$$

$$\angle C = 180 - 95 = 85^\circ$$

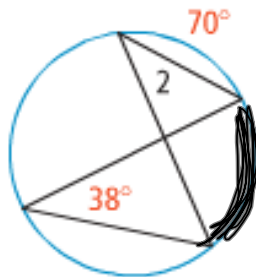
$$\angle D = 180 - 77 = 103^\circ$$

12.3 Inscribed Angles



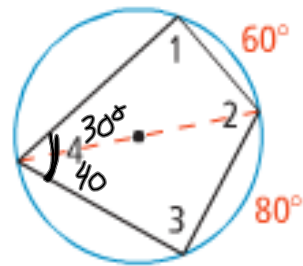
Find $\angle 1$.

$\angle 1 = 90^\circ$
inscribed in
a semicircle.



Find $\angle 2$.

$\angle 2 = 38^\circ$
shares the
same arc



$\angle 1 = 90^\circ$

$\angle 3 = 90^\circ$

$\angle 4 = 30 + 40 = 70^\circ$

$\angle 2 = 180 - 70 = 110^\circ$

12.3 Inscribed Angles

In the diagram, \overleftrightarrow{SR} is a tangent to the circle at Q . If $m\widehat{PMQ} = 212$, what is $m\angle PQR$?

Option 1

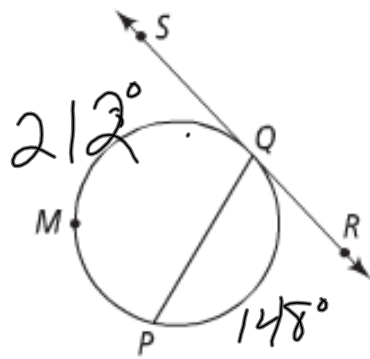
If $\widehat{PMQ} = 212$

then $\widehat{PQ} = 360 - 212$

$$\widehat{PQ} = 148^\circ$$

$$\angle PQR = \frac{1}{2}(148^\circ)$$

$$\angle PQR = 74^\circ$$



Option 2

If $\widehat{PMQ} = 212$
then $\angle SQP = 106$

so $\angle SQP + \angle PQR$ are
a linear pair

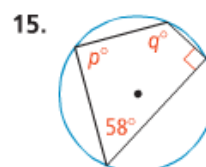
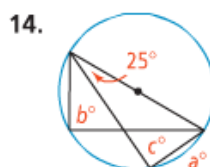
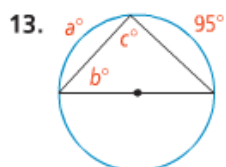
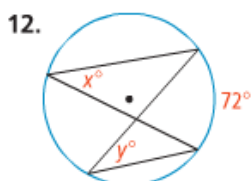
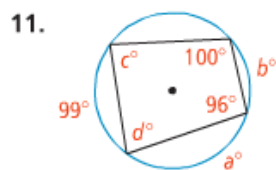
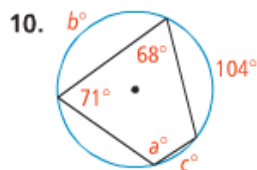
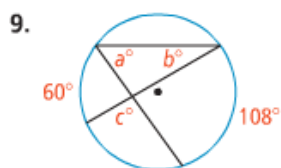
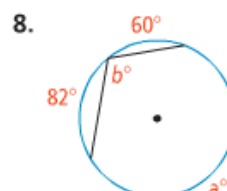
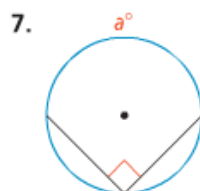
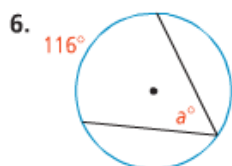
$$\angle PQR = 180 - 106$$

$$\angle PQR = 74^\circ$$

12.3 Inscribed Angles

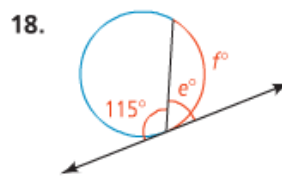
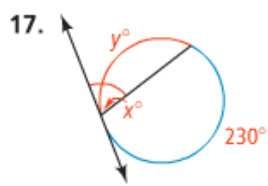
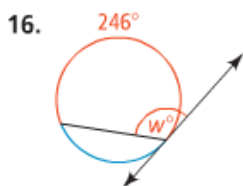
Find the value of each variable. For each circle, the dot represents the center.

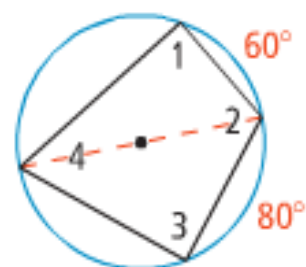
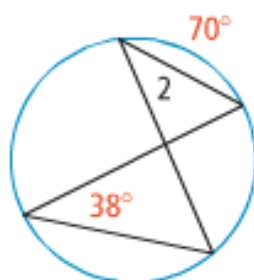
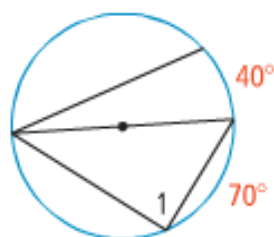
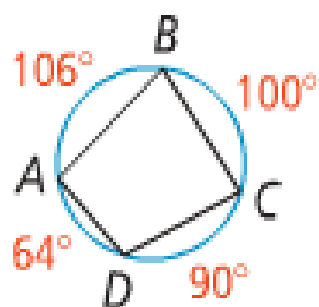
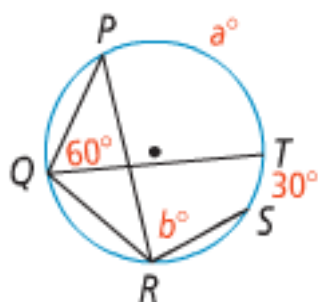
◀ See Problems 1 and 2.



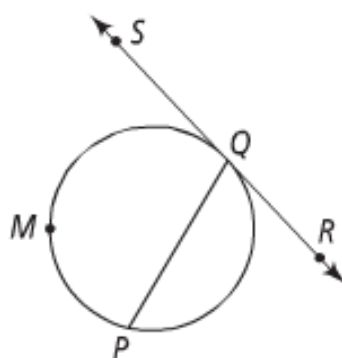
Find the value of each variable. Lines that appear to be tangent are tangent.

◀ See Problem 3.





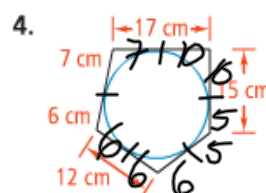
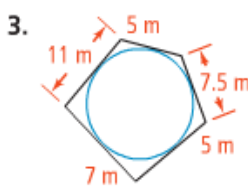
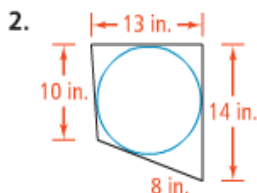
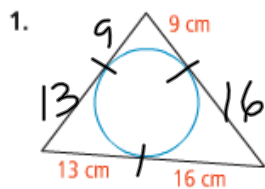
In the diagram, \overleftrightarrow{SR} is a tangent to the circle at Q . If $m\widehat{PMQ} = 212$, what is $m\angle PQR$?



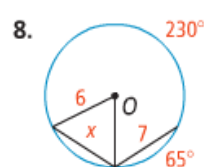
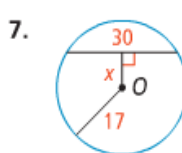
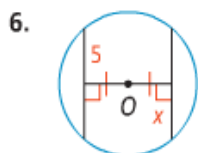
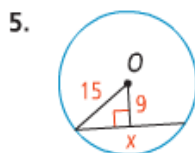
12.1 - 12.3 Practice

Name _____ Date _____ Per. _____

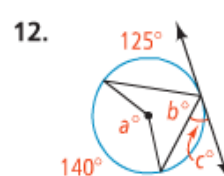
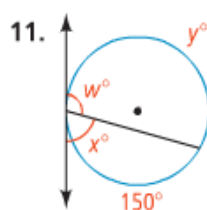
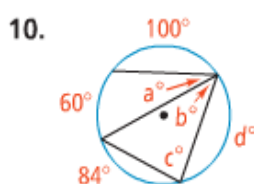
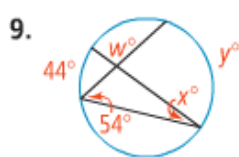
Each polygon below circumscribes a circle, find the perimeter of the polygon.



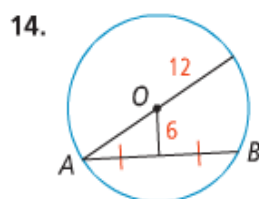
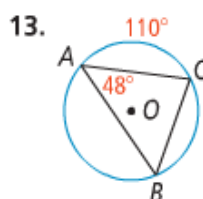
Find the value of x in each circle.



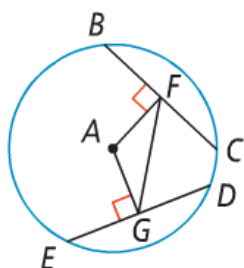
Find the value of each variable. Lines that appear to be tangent are tangent. The dot represents the center of the circle.



Find $m\widehat{AB}$.



15. Use the diagram below to explain why $\angle AFG \cong \angle AGF$.



Challenge. Find the measure of each lettered angle in the diagram below.

