## Spiral Review:

1. Factor

a.) $x^2 + 10x + 24$

$\boxed{(x+6)(x+4)}$

b.) $x^2 - 3x = 28$

$x^2 - 3x - 28 = 0$

$(x-7)(x+4) = 0$

$\boxed{x = 7}$ $\boxed{x = -4}$

2. FOIL

a.) $(3x-2)(x+3)$

$3x^2 + 9x - 2x - 6$

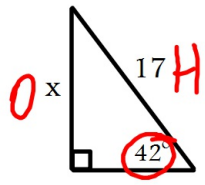
$\boxed{3x^2 + 7x - 6}$

b.) $(x+4)^2$

$(x+4)(x+4)$

$x^2 + 4x + 4x + 16 \Rightarrow \boxed{x^2 + 8x + 16}$

3. Solve for x.

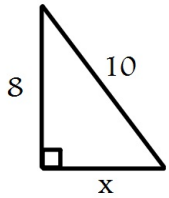



$\frac{\sin 42}{1} = \frac{x}{17}$

$17 \sin 42 = x$

$\boxed{x = 11.4}$

4. Solve for x.




$8^2 + x^2 = 10^2$

$64 + x^2 = 100$

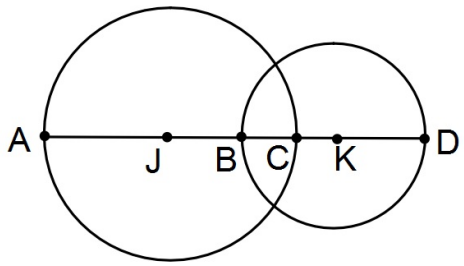
$-64 \quad -64$

$\sqrt{x^2} = \sqrt{36}$

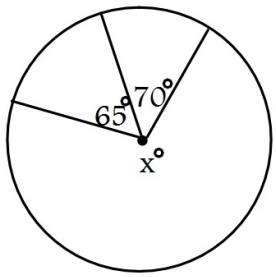
$\boxed{x = 6}$

## 10.1 – 10.4 Review

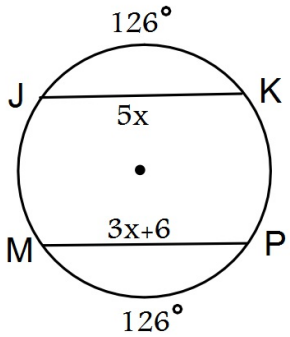
1. Circle J has a radius of 10 units and circle K has a radius of 8 units. BC = 5.4 units. Find CK and AB.



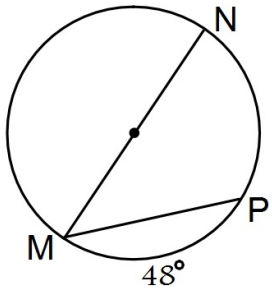

2. Find x.




3. Find x.

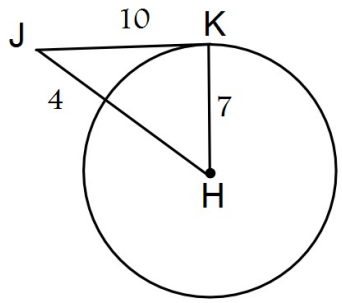



4. Find m∠M.

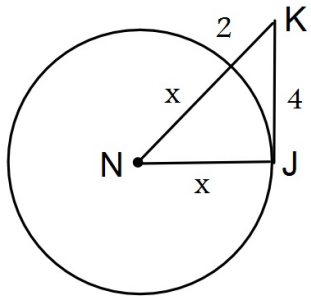


# 10.5 Review

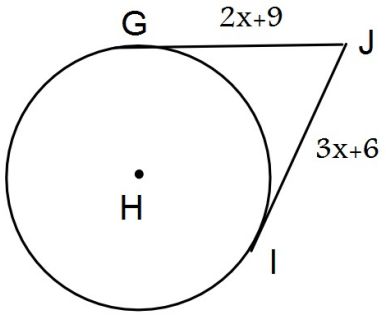
1. Is JK a tangent?



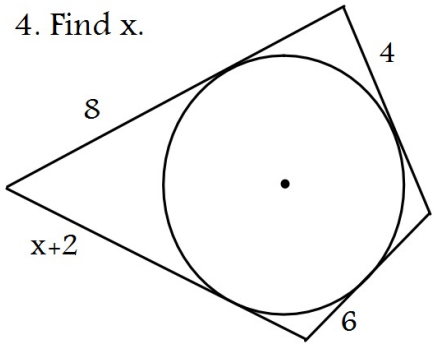

2. Find x.



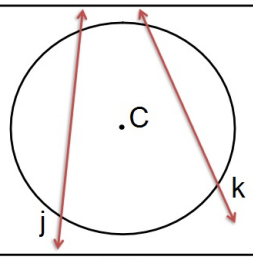
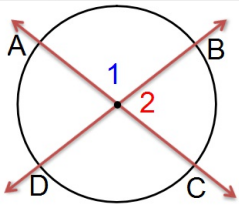
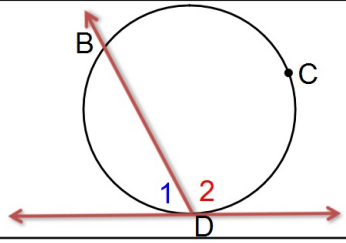

3. Find x.



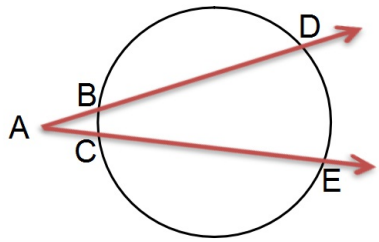
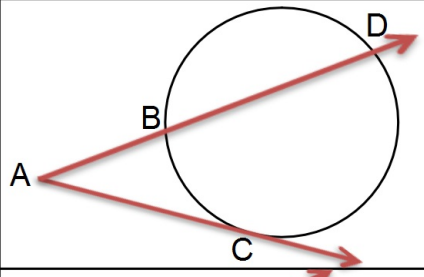
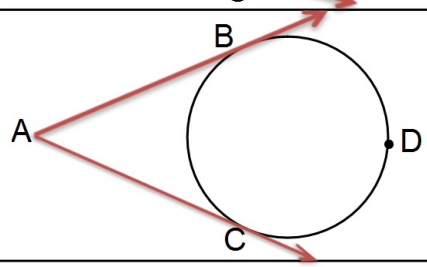

4. Find x.




## p. 741 10.6 Secants, Tangents, and Angle Measures

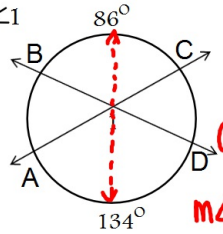
| | |
|---|---|
| A secant is a line that intersects a circle in exactly 2 points.<br>example: |  |
| If two secants or chords intersect in the interior of a circle, then....<br>$m\angle 1 = \frac{1}{2}(m\widehat{AB} + m\widehat{DC})$ |  |
| If a tangent and a secant intersect at the point (on) of tangency then....<br>$m\angle 1 = \frac{1}{2} m\widehat{BD}$ $m\angle 2 = \frac{1}{2} m\widehat{DCB}$ |  |

# p. 741 10.6 Secants, Tangents, and Angle Measures

| | |
|---|---|
| If two secants intersect in the exterior of a circle, then.... $m\angle A = \frac{1}{2}(m\widehat{DE} - m\widehat{BC})$ |   |
| If a tangent or a chord (secant) intersect in the exterior of a circle, then.... $m\angle A = \frac{1}{2}(m\widehat{DC} - m\widehat{BC})$ |   |
| If two tangent intersect in the exterior of a circle, then.... $m\angle A = \frac{1}{2}(m\widehat{BDC} - m\widehat{BC})$ |   |

**Example 1:** Find each measure. Assume that segments that appear to be tangent are tangent

1. $m\angle 1$




(inside)

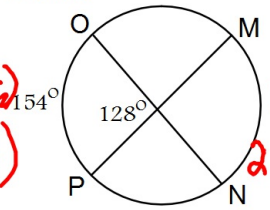
angle $= \frac{1}{2}(\text{arc}_1 + \text{arc}_2)$

$m\angle 1 = \frac{1}{2}(86 + 134)$

$m\angle 1 = \frac{1}{2}(220)$

$\boxed{m\angle 1 = 110°}$

2. $m\widehat{MN}$




(inside)

angle $= \frac{1}{2}(\text{arc}_1 + \text{arc}_2)$

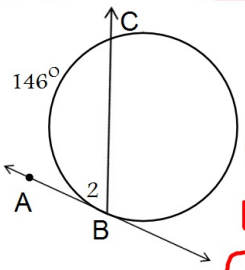
$2(128) = \frac{1}{2}(m\widehat{MN} + 154)$

$256 = m\widehat{MN} + 154$

$-154 \qquad -154$

$\boxed{102° = m\widehat{MN}}$

3. $m\angle 2$



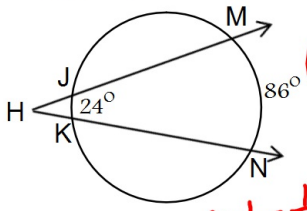

(on)

angle $= \frac{1}{2}$arc

$m\angle 2 = \frac{1}{2}(146)$

$\boxed{m\angle 2 = 73°}$

4. $m\angle H$




(outside)

angle $= \frac{1}{2}(\text{arc} - \text{arc})$

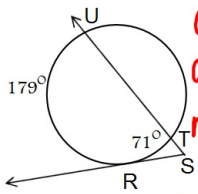
$m\angle H = \frac{1}{2}(86 - 24)$

$= \frac{1}{2}(62)$

$\boxed{m\angle H = 31}$

**Example 2.** Find each measure. Assume that segments that appear to be tangent are tangent.

1. m∠S




(outside)

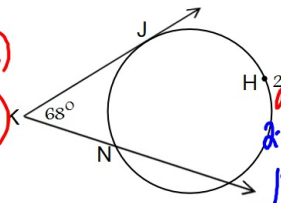
angle = $\frac{1}{2}$(arc − arc)

m∠S = $\frac{1}{2}$(179 − 71)

= $\frac{1}{2}$(108)

$\boxed{m\angle S = 54°}$

2. m$\overset{\frown}{JN}$




(outside)

angle = $\frac{1}{2}$(arc − arc

2 · 68 = $\frac{1}{2}$(224 − $\overset{\frown}{JN}$)

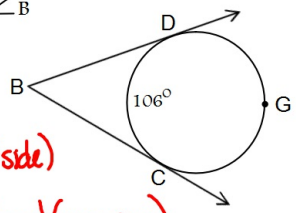
136 = 224 − $\overset{\frown}{JN}$

−224 −224

$\frac{-88}{-1} = \frac{-\overset{\frown}{JN}}{-1}$

$\boxed{88 = \overset{\frown}{JN}}$

3. m∠B




(outside)

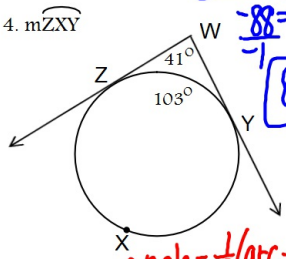
angle = $\frac{1}{2}$(arc − arc)

m∠B = $\frac{1}{2}$(254 − 106)

= $\frac{1}{2}$(148)

$\boxed{m\angle B = 74°}$

4. m$\overset{\frown}{ZXY}$




angle = $\frac{1}{2}$(arc − arc)

2 · 41 = $\frac{1}{2}$(m$\overset{\frown}{ZXY}$ − 103)

82 = m$\overset{\frown}{ZXY}$ − 103

+103 +103

$\boxed{185 = m\overset{\frown}{ZXY}}$

Turn-in:

Quick Check 10.6

HW:

Wbk p. 133 1-12 all