

1. Use the diagram below, state a figure with correct notation that best describes the term.

Chord \overline{EB} , \overline{DE}

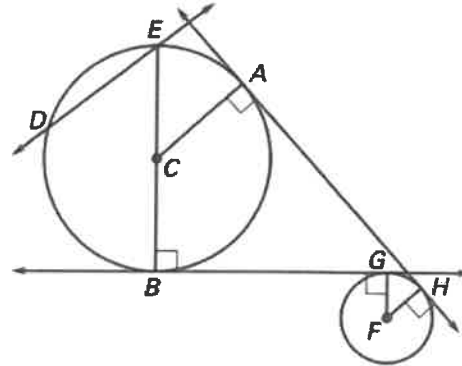
Point of Tangency $\cdot A, \cdot B, \cdot G, \cdot H$

Center $\cdot C, \cdot F$

Radius $\overline{AC}, \overline{GF}, \overline{FH}$

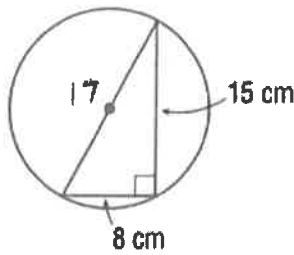
Diameter \overline{EB}

Secant \overleftrightarrow{ED}



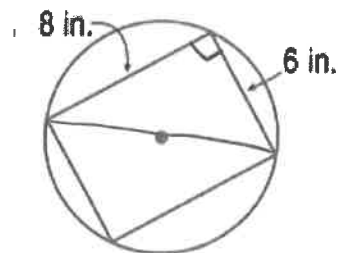
2. Find the circumference of each circle by using the given inscribed or circumscribed polygon.

a.



$$C = 17\pi$$

b.

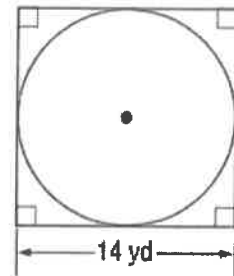


$$8^2 + 6^2 = d^2$$

$$10 = d$$

$$C = 10\pi$$

c.



$$C = 14\pi$$

3. If the diameter of a circle is 8cm, what is the radius?

$$r = 4\text{cm}$$

4. If the circumference of a circle is 16π in what is the area of the circle?

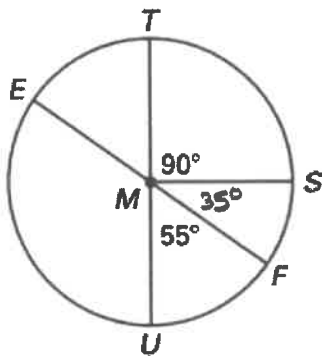
$$16\pi = 2\pi r$$

$$8 = r$$

$$A = \pi r^2$$

$$A = 64\pi \text{ in}^2$$

5. Find the indicated measures:



$$m\widehat{ET} = 55^\circ$$

$$m\widehat{SF} = 35^\circ$$

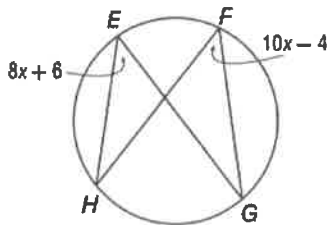
$$m\angle EMS = 145^\circ$$

$$m\widehat{TSM} = 125^\circ$$

$$m\angle SMU = 90^\circ$$

$$m\angle EMU = 125^\circ$$

6. Find the value of x

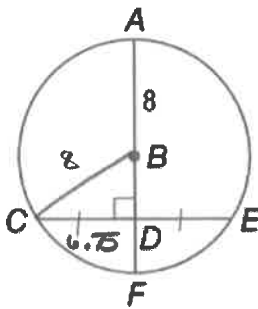


$$8x + 6 = 10x - 4$$

$$10 = 2x$$

$$5 = x$$

7. In $\odot B$, $CE = 13.5$. Find BD , round to the nearest hundredth.

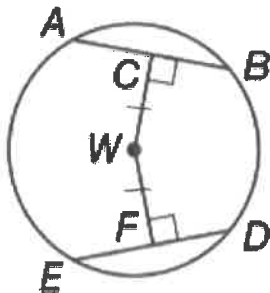


$$(BD)^2 + (6.75)^2 = 8^2$$

$$(BD)^2 = 18.4375$$

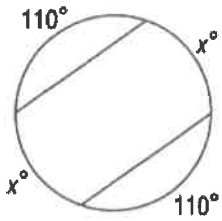
$$BD = 4.29$$

8. If $CW = WF$ and $ED = 30$, what is the measure of AB ?



$$AB = 30$$

9. Find the value of x

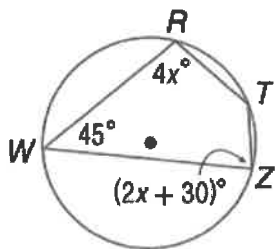


$$360 = 110 + 110 + x + x$$

$$360 = 220 + 2x$$

$$140 = 2x \quad x = 70^\circ$$

10. Find the $m\angle T$ and $m\angle Z$



$$m\angle T = 135^\circ$$

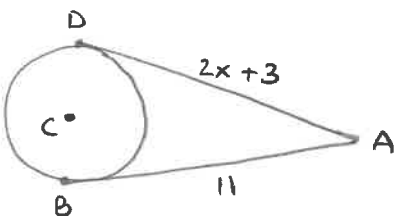
$$4x + 2x + 30 = 180$$

$$6x + 30 = 180$$

$$6x = 150$$

$$x = 25$$

$$m\angle Z = 80^\circ$$

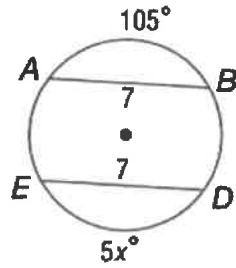


$$2x + 3 = 11$$

$$2x = 8$$

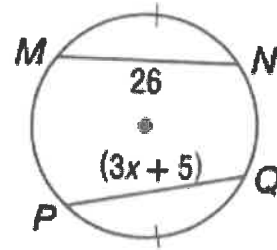
$$x = 4$$

$$x = 4$$



$$5x = 105$$

$$x = 21^\circ$$

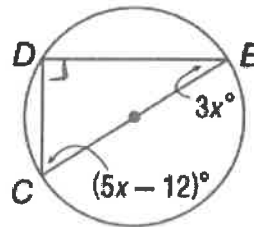


$$26 = 3x + 5$$

$$21 = 3x$$

$$7 = x$$

11. Find the value of x

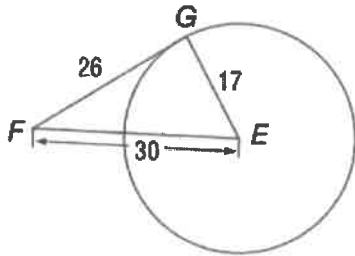


$$180 = 90 + 3x + 5x - 12$$

$$102 = 8x$$

$$12.75 = x$$

12. Determine whether \overline{FG} is tangent to the circle:



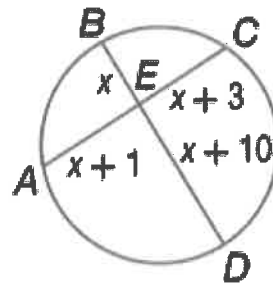
$$30^2 \stackrel{?}{=} 26^2 + 17^2$$

$$900 \stackrel{?}{=} 676 + 289$$

$$900 \neq 965$$

\overline{FG} is not
tangent

13. Find the value of x



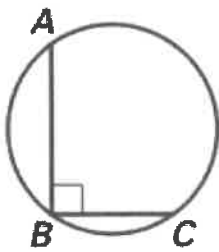
$$x(x+10) = (x+3)(x+1)$$

$$x^2 + 10x = x^2 + 4x + 3$$

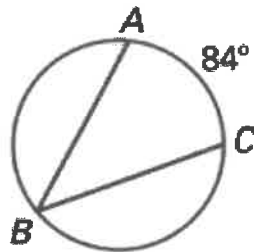
$$6x = 3$$

$$x = \frac{1}{2}$$

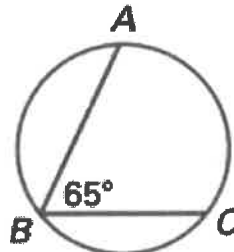
14. Find the unknown lengths of $\angle ABC$ or arc \widehat{AC}



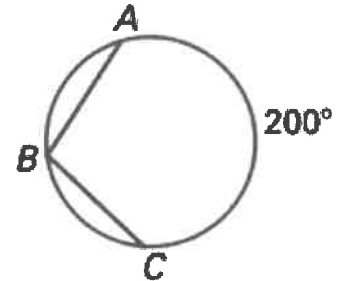
$$m\widehat{AC} = 180^\circ$$



$$m\angle ABC = 42^\circ$$



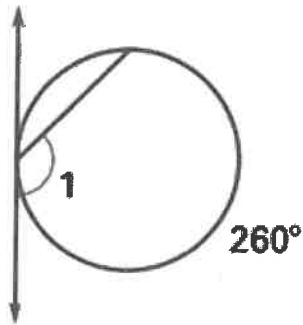
$$m\widehat{AC} = 130^\circ$$



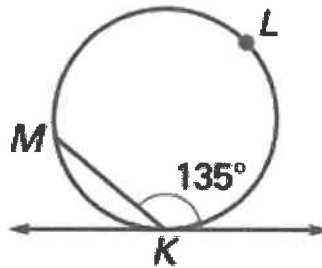
$$m\angle ABC = 100^\circ$$

15. Find the indicated measure.

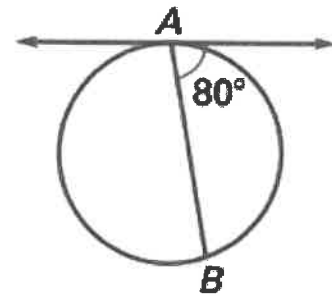
$$m\angle 1 = 130^\circ$$



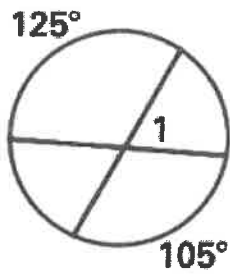
$$m\widehat{MLK} = 270^\circ$$



$$m\widehat{AB} = 160^\circ$$



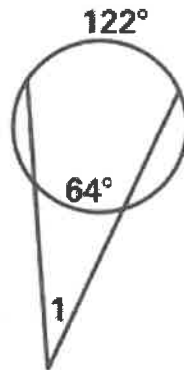
16. Find the $m\angle 1$



$$180 - m\angle 1 = \frac{1}{2}(125 + 105)$$

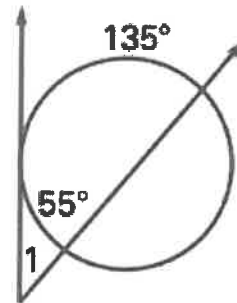
$$180 - m\angle 1 = 115$$

$$m\angle 1 = 65^\circ$$



$$m\angle 1 = \frac{1}{2}(122 - 64)$$

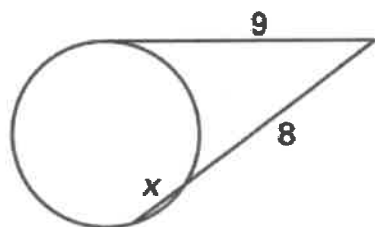
$$m\angle 1 = 29^\circ$$



$$m\angle 1 = \frac{1}{2}(135 - 55)$$

$$= 40^\circ$$

17. Find the value of x

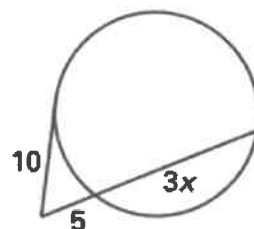


$$9^2 = 8(8+x)$$

$$81 = 64 + 8x$$

$$17 = 8x$$

$$2.125 = x$$

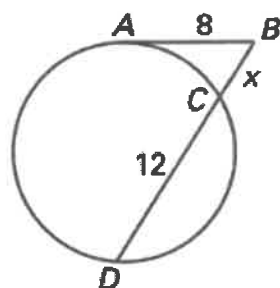


$$10^2 = 5(5+3x)$$

$$100 = 25 + 15x$$

$$75 = 15x$$

$$5 = x$$



$$8^2 = x(12+x)$$

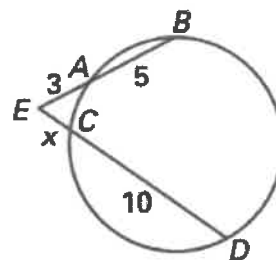
$$64 = 12x + x^2$$

$$0 = x^2 + 12x - 64$$

$$0 = (x-4)(x+16)$$

$$x = 4, -16$$

$$x = 4$$



$$3(8) = x(10+x)$$

$$24 = 10x + x^2$$

$$0 = x^2 + 10x - 24$$

$$0 = (x+12)(x-2)$$

$$x = -12, 2$$

$$x = 2$$

18. Identify the center and radius of the circle $(x-2)^2 + (y+4)^2 = 25$

center : $(2, -4)$

$r = 5$