

Circles

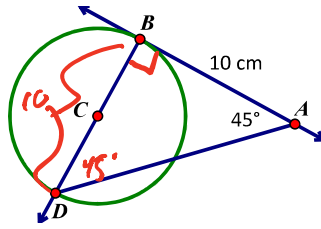
G.C.A.2

Review 13

Name _____

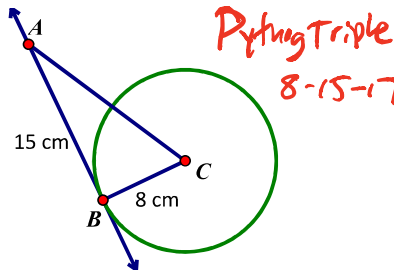
Solve for the missing information, given the \overline{AB} is a tangent line to circle C.

1. $CB = \underline{5}$



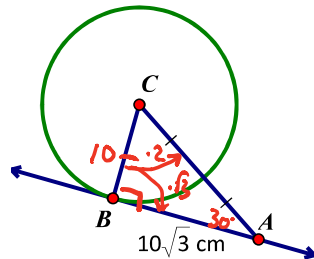
$CB = \frac{1}{2}(10)$
 $CB = 5$

2. $AC = \underline{17 \text{ cm}}$



$x^2 + y^2 = r^2$
 $(8)^2 + (15)^2 = AC^2$
 $64 + 225 = AC^2$
 $289 = AC^2$
 $\pm 17 = AC$

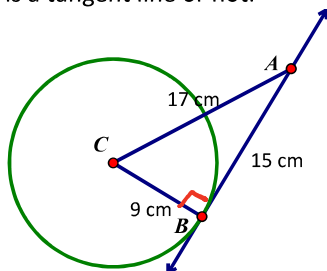
3. $CB = \underline{10 \text{ cm}}$



$30^\circ - 60^\circ - 90^\circ$

Determine if the \overline{AB} is a tangent line or not.

4. Yes or No

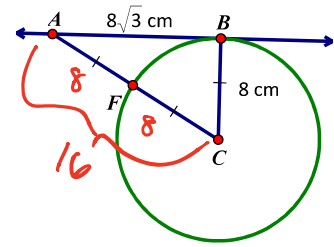


$x^2 + y^2 < r^2$
 $(9)^2 + (15)^2 < (17)^2$
 $81 + 225 < 289$
 $306 < 289$

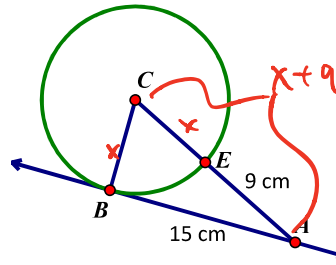
5. Yes or No

$x^2 + y^2 = r^2$

$30^\circ - 40^\circ - 90^\circ$

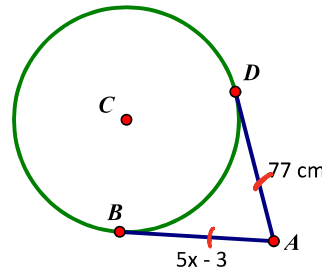


6. Given that \overline{AB} is tangent to circle C and $EA = 9 \text{ cm}$ and $AB = 15 \text{ cm}$, determine CB . (Hint: Label the two radii with x)



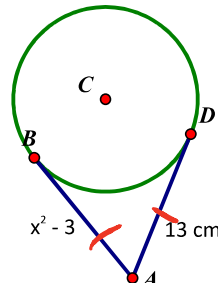
$x^2 + y^2 = r^2$
 $x^2 + (15)^2 = (x+9)^2$
 $x^2 + 225 = x^2 + 18x + 81$
 $225 = 18x + 81$
 $144 = 18x$
 $8 = x$
 $CB = 8 \text{ cm}$

7. If \overline{AB} and \overline{AD} are tangent, then $x = \underline{16 \text{ cm}}$



$5x-3 = 77$
 $5x = 80$
 $x = 16$

8. If \overline{AB} and \overline{AD} are tangent, then $x = \underline{\pm 4 \text{ cm}}$



$x^2 - 3 = 13$
 $x^2 = 16$
 $x = \pm 4$

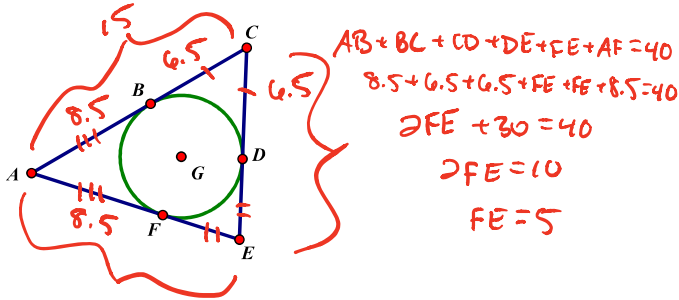
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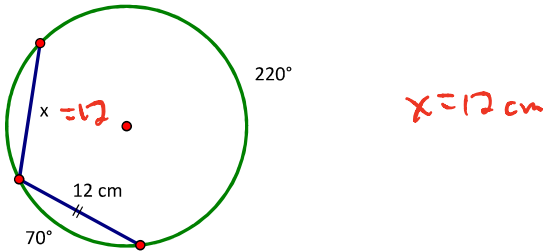
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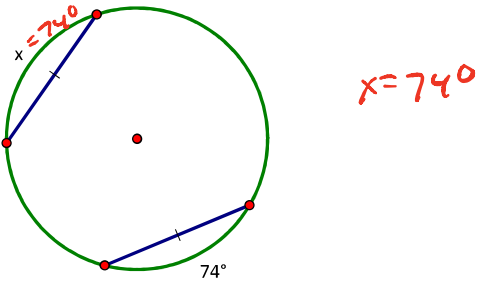
9. Perimeter $\Delta = 40$ cm, $AC = 15$ cm, $AF = 8.5$ cm, find FE



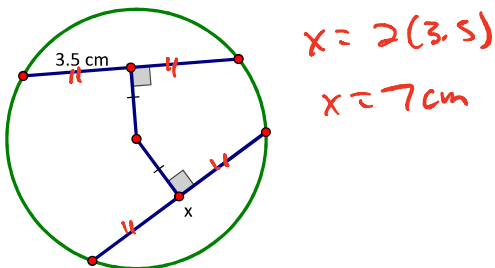
10. Find the value of x.



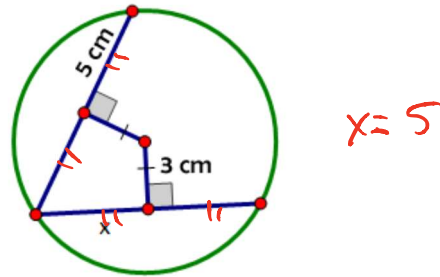
11. Find the value of x.



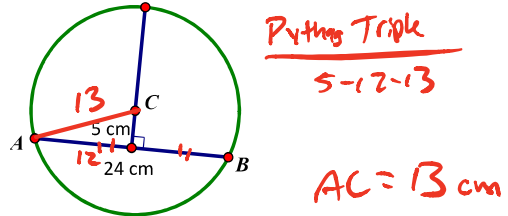
12. Find the value of x.



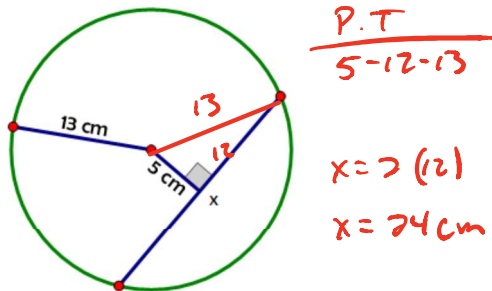
13. Find the value of x.



14. Determine the length of the radius \overline{AC}

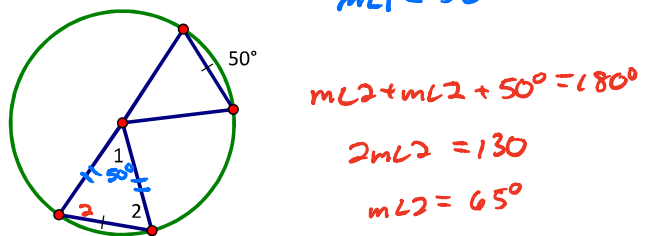


15. Find the value of x.



Find the measure of each numbered angle or arc.

16.



Circles

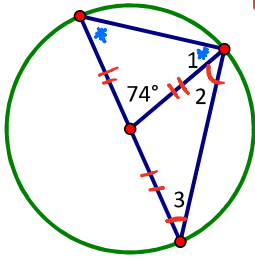
G.C.A.2

Review 13

Name _____

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17.



$$m\angle 2 + m\angle 2 = 74^\circ$$

$$2m\angle 2 = 74^\circ$$

$$m\angle 2 = 37^\circ$$

$$m\angle 3 = 37^\circ$$

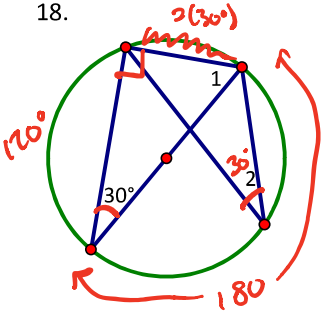
$$m\angle 1 + m\angle 1 + 74 = 180^\circ$$

$$2m\angle 1 + 74 = 180^\circ$$

$$2m\angle 1 = 106$$

$$m\angle 1 = 53^\circ$$

18.

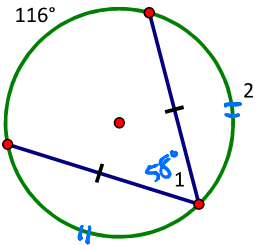


$$m\angle 1 = \frac{1}{2}(120^\circ)$$

$$m\angle 1 = 60^\circ$$

$$m\angle 2 = 30^\circ$$

19.



$$m\angle 1 = \frac{1}{2}(116^\circ)$$

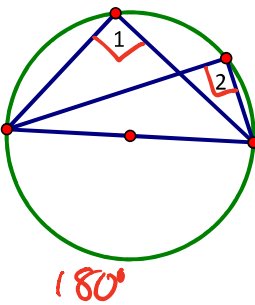
$$m\angle 1 = 58^\circ$$

$$m\widehat{2} + m\widehat{1} + 116 = 360^\circ$$

$$2m\widehat{2} = 244^\circ$$

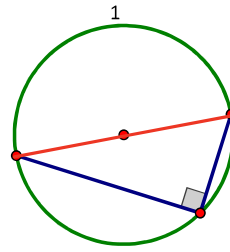
$$m\widehat{2} = 122^\circ$$

20.



$$m\angle 1 = m\angle 2 = 90^\circ$$

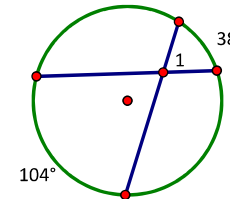
21.



$$m\widehat{1} = 180^\circ$$

Find the measure of each variable, numbered angle or arc.

22.

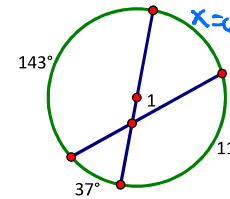


$$m\angle 1 = \frac{1}{2}(38 + 104)$$

$$m\angle 1 = \frac{1}{2}(142)$$

$$m\angle 1 = 71^\circ$$

23.



$$x + 143 + 116 + 37 = 360$$

$$x + 296 = 360$$

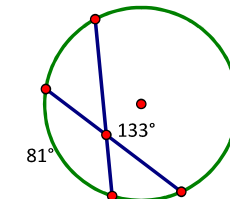
$$x = 64$$

$$m\angle 1 = \frac{1}{2}(64 + 37)$$

$$m\angle 1 = \frac{1}{2}(101)$$

$$m\angle 1 = 50.5^\circ$$

24.



$$133^\circ = \frac{1}{2}(m\widehat{1} + 81^\circ)$$

$$266^\circ = m\widehat{1} + 81^\circ$$

$$185^\circ = m\widehat{1}$$

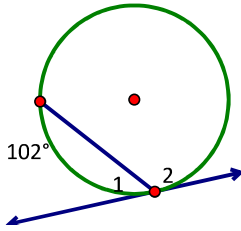
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25.



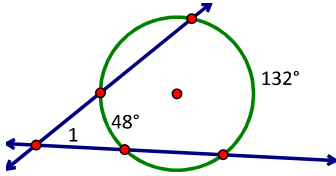
$$m\angle 1 = \frac{1}{2}(102^\circ)$$

$$m\angle 1 = 51^\circ$$

$$m\angle 2 + 51^\circ = 180^\circ$$

$$m\angle 2 = 129^\circ$$

26.

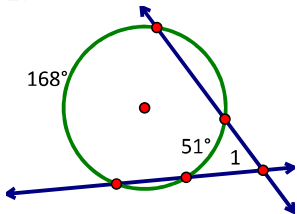


$$m\angle 1 = \frac{1}{2}(132^\circ - 48^\circ)$$

$$m\angle 1 = \frac{1}{2}(84^\circ)$$

$$m\angle 1 = 42^\circ$$

27.

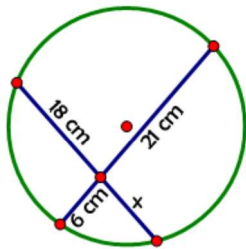


$$m\angle 1 = \frac{1}{2}(168^\circ - 51^\circ)$$

$$m\angle 1 = \frac{1}{2}(117^\circ)$$

$$m\angle 1 = 58.5^\circ$$

Find the measure of each variable, numbered angle or arc.
28.

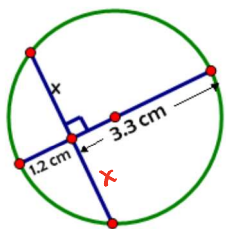


$$18x = 6(21)$$

$$18x = 126$$

$$x = 7 \text{ cm}$$

29.



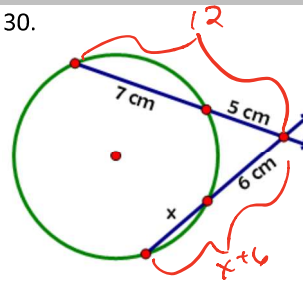
$$x \cdot x = 12(3.3)$$

$$x^2 = 3.96$$

$$x = \pm \sqrt{3.96}$$

$$x = \sqrt{3.96} \text{ cm}$$

30.



$$(out)(whole) = (out)(whole)$$

$$(5)(12) = (x)(6+x)$$

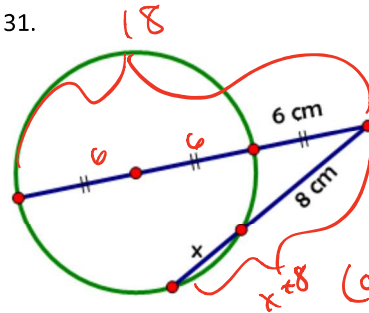
$$60 = 36 + 6x$$

$$24 = 6x$$

$$4 = x$$

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

31.



$$(out)(whole) = (out)(whole)$$

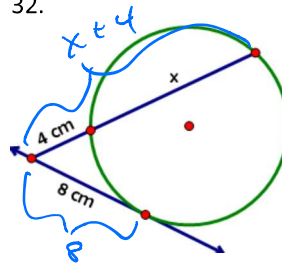
$$(6)(18) = 8(x+8)$$

$$108 = 8x + 64$$

$$44 = 8x$$

$$5.5 \text{ cm} = x$$

32.



$$(out)(whole) = (out)(whole)$$

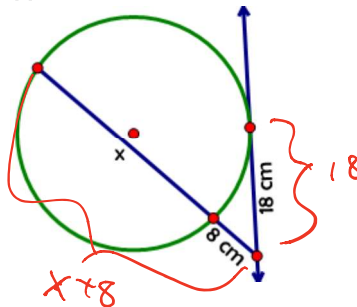
$$(4)(x+4) = (8)(8)$$

$$4x + 16 = 64$$

$$4x = 48$$

$$x = 12 \text{ cm}$$

33.



$$(out)(whole) = (out)(whole)$$

$$18(18) = 8(x+8)$$

$$324 = 8x + 64$$

$$260 = 8x$$

$$32.5 \text{ cm} = x$$