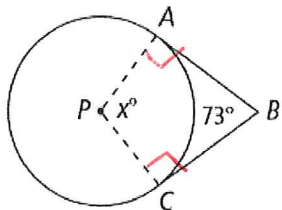


Read directions carefully. Round all decimals to the nearest hundredth. SHOW ALL WORK.

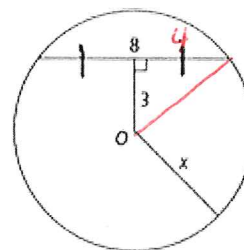
1. What is the value of x ? Lines that appear to be tangent are tangent.

a.



$$90 + 90 + 73 + x = 360$$

b.

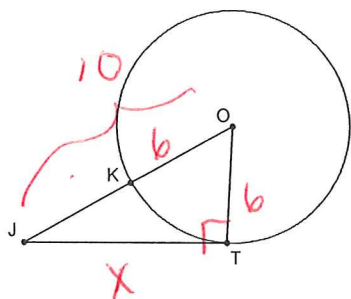


$$3^2 + 4^2 = x^2$$

a. $x =$ 107

b. $x =$ 5

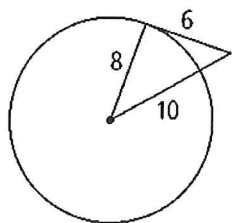
2. JT is tangent to circle O at T. If $OT = 6$ and $JO = 10$, then find the length of \overline{JT} .



$$6^2 + x^2 = 10^2$$

JT = 8

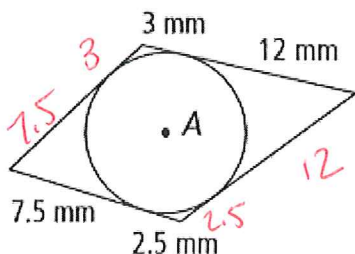
3. Determine whether a tangent is shown in the following diagram. Explain and/or show work to support your answer.



Yes or No, because....

yes b/c $6^2 + 8^2 = 10^2$
so \perp

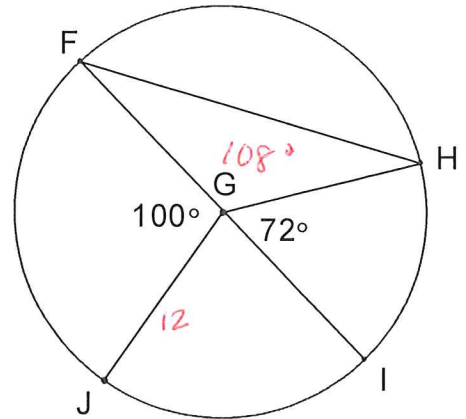
4. The polygon below circumscribes the circle. What is the perimeter of the polygon?



perimeter = 50

Practice; Use circle G to the right and give an example of the following;

- 1) Diameter \widehat{FI}
- 2) 3 radii \widehat{FG} \widehat{HG} \widehat{GJ}
- 3) 2 central angles $\angle HGI$ $\angle FGJ$
- 4) Semicircle \widehat{FHI}
- 5) Minor arc \widehat{FH}
- 6) Major arc \widehat{HJF}



- 7) $m\angle IGJ = \underline{80^\circ}$
- 8) $m\widehat{IJ} = \underline{80^\circ}$
- 9) $m\widehat{JFH} = \underline{208^\circ}$
- 10) LENGTH of \widehat{IJ} if radius of this circle G is 12 cm.

$$\frac{80}{360} \cdot 2\pi(12) = \frac{80}{360}$$

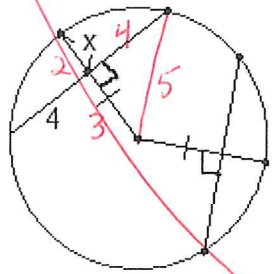
$$360L = 1920\pi$$

$$5.3\pi \approx 16.7$$

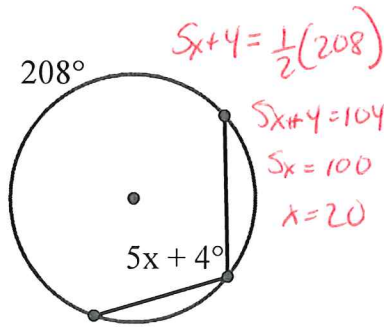
12.3

For #13 – 18, use each diagram to solve for "x";

- 13) $x = \underline{2}$
Radius = 5 cm



- 14) $x = \underline{20}$



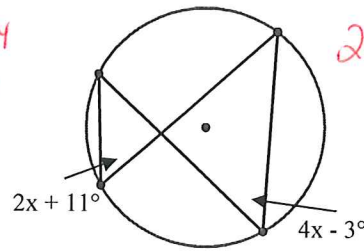
$$5x + 4 = \frac{1}{2}(208)$$

$$5x + 4 = 104$$

$$5x = 100$$

$$x = 20$$

- 15) $x = \underline{7}$

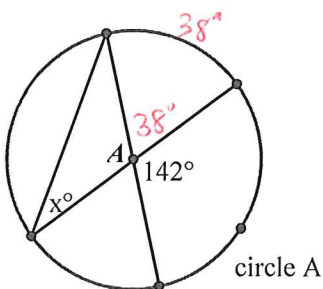


$$2x + 11 = 4x - 3$$

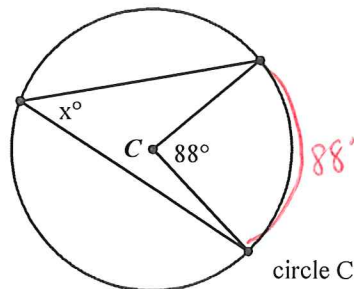
$$14 = 2x$$

$$180 =$$

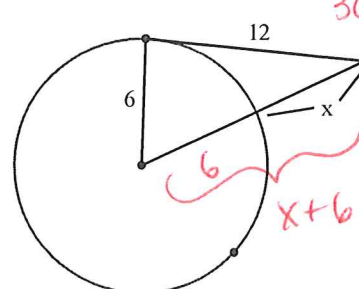
- 16) $x = \underline{19^\circ}$



- 17) $x = \underline{44^\circ}$



- 18) $x = \underline{\hspace{2cm}}$



$$6^2 + 12^2 = (x+6)^2$$

$$36 + 144 = x^2 + 12x + 36$$

$$180 = x^2 + 12x + 36$$

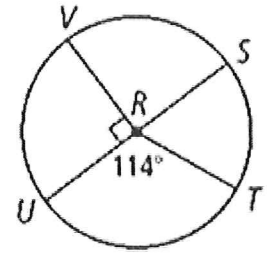
$$x^2 + 12x - 144 = 0$$

$$(x+6)(x-6)$$

10.6 – 10.7 review/practice

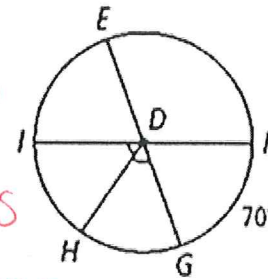
Find the measure of each arc in circle R.

- | | | |
|-------------------------|-------------------------|-------------------------|
| 5. \widehat{ST} 66 | 6. \widehat{SV} 90 | 7. \widehat{VST} 156 |
| 8. \widehat{UV} 90 | 9. \widehat{VUT} 204 | 10. \widehat{SVT} 294 |
| 11. \widehat{USV} 270 | 12. \widehat{UTS} 180 | 13. \widehat{UVT} 246 |
| 14. \widehat{TUS} 294 | 15. \widehat{TSU} 246 | 16. \widehat{VUS} 270 |

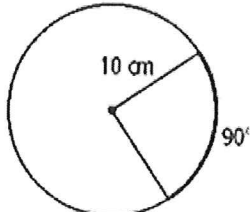
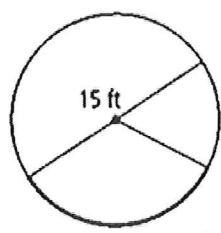
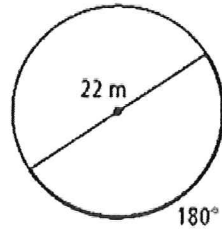


Find each indicated measure for $\odot D$.

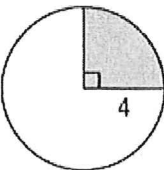
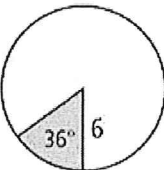
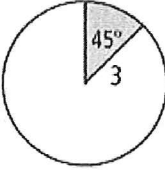
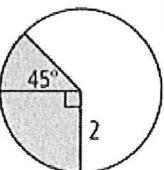
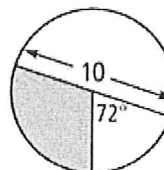
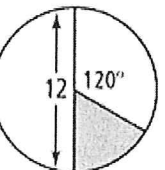
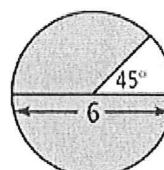
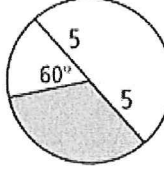
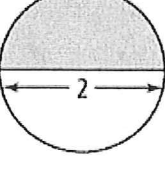
- | | |
|--------------------------|--------------------------|
| 17. $m\angle EDI$ 70 | 18. $m\widehat{EF}$ 110 |
| 19. $m\widehat{GI}$ 110 | 20. $m\angle ADH$ 55 |
| 21. $m\widehat{FHE}$ 250 | 22. $m\widehat{GIF}$ 290 |



Find the length of each darkened arc. Leave answers in terms of pi.

- | | | |
|---|---|---|
| 30.  | 31.  | 32.  |
| 50π cm | 5π ft | 11π m |

Find the area of each shaded sector of a circle. Leave your answer in terms of π.

- | | | |
|---|---|--|
| 9.  | 10.  | 11.  |
| 4π | $\frac{18}{5}\pi = 3.6\pi$ | $\frac{9}{8}\pi = 1.125\pi$ |
| 12.  | 13.  | 14.  |
| $\frac{3}{2}\pi = 1.5\pi$ | $\frac{15}{2}\pi = 7.5\pi$ | 6π |
| 15.  | 16.  | 17.  |
| $\frac{63}{8}\pi = 7.875\pi$ | $\frac{25}{3}\pi = 8.3\pi$ | $\frac{\pi}{2}$ |