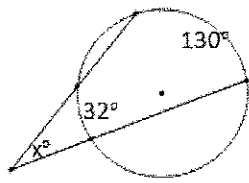


Circles – Test Review

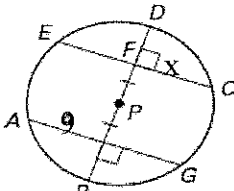
Name: Key

1. Solve for x on each of the following:

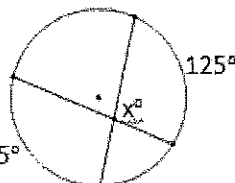
A. 

$$\frac{130 - 32}{2}$$

$$x = 49^\circ$$

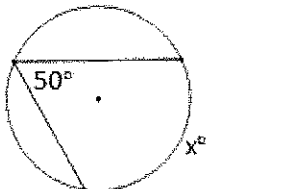
B. 

$$x = 9$$

C. 

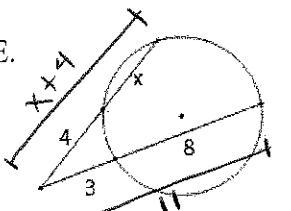
$$\frac{125 + 95}{2}$$

$$x = 110^\circ$$

D. 

$$50(2) = x$$

$$100^\circ = x$$

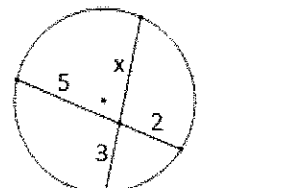
E. 

$$4(x+4) = 3(11)$$

$$4x + 16 = 33$$

$$\frac{4x}{4} = \frac{17}{4}$$

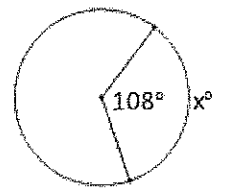
$$x = 4.25$$

F. 

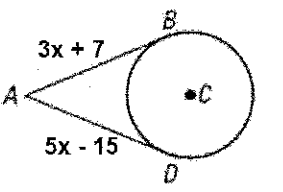
$$5(2) = 3(x)$$

$$\frac{10}{3} = \frac{3x}{3}$$

$$3.333 = x$$

G. 

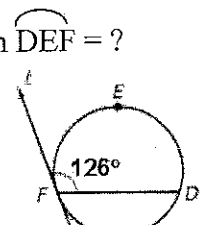
$$x = 108^\circ$$

H. 

$$3x + 7 = 5x - 15$$

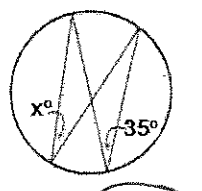
$$\frac{22}{2} = \frac{2x}{2}$$

$$11 = x$$

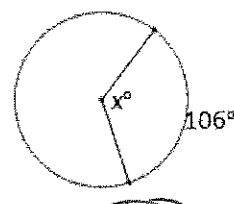
I. $m\widehat{DEF} = ?$


$$126(2)$$

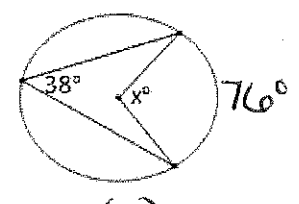
$$252^\circ$$

J. 

$$x = 35^\circ$$

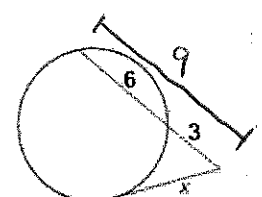
K. 

$$x = 106^\circ$$

L. 

$$38(2) = x$$

$$76^\circ = x$$

M. 

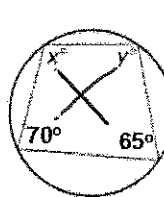
$$3(9) = x(x)$$

$$27 = x^2$$

$$\sqrt{27} = \sqrt{x^2}$$

$$3\sqrt{3} = x$$

$$5.196 = x$$

N. 

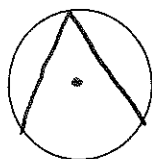
$$x + 65 = 180$$

$$x = 115^\circ$$

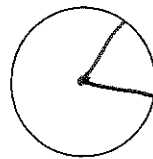
$$y + 70 = 180$$

$$y = 110^\circ$$

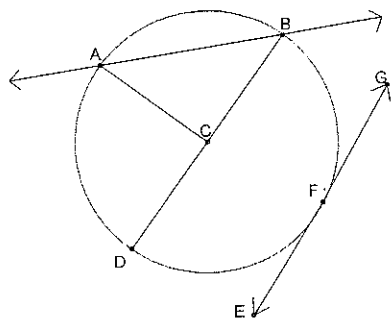
2. A. Draw an example of each: inscribed angle:



central angle:

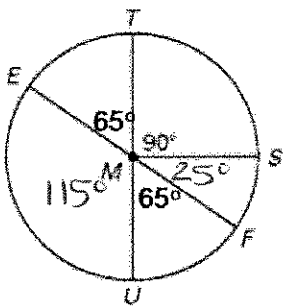


3. Identify the name for each of the following:



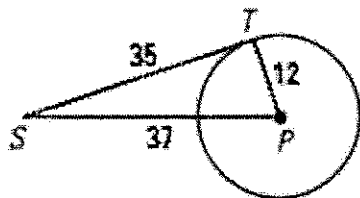
- A. \overline{AB} is called a chord.
- B. \widehat{FAD} is called a major arc.
- C. \overleftrightarrow{AB} is called a secant.
- D. \overleftrightarrow{EG} is called a tangent.
- E. \overline{DB} is called a diameter.
- F. \overline{BC} is called a radius.

4. Find the requested measures of the following:



- A. The $m\widehat{ET}$ is 65° .
- B. The $m\widehat{SF}$ is 25° .
- C. The $m\angle EMS$ is $90 + 65 = 155^\circ$.
- D. The $m\widehat{ETF}$ is 180° .
- E. The $m\widehat{EU}$ is 115° .

5. Determine whether or not ST is a Tangent.



$$12^2 + 35^2 = 37^2$$

$$1369 = 1369 \quad \checkmark$$

yes, \overline{ST} is tangent

6. Find the Volume of the following:

a.
$$V = \frac{1}{3} \pi r^2 h$$

$$= \frac{1}{3} \pi (3)^2 (11)$$

$$= 33\pi$$

$$= 103.673 \text{ cm}^3$$

b.
$$V = \pi r^2 h$$

$$= \pi (2)^2 (4)$$

$$= 16\pi$$

$$= 50.265 \text{ cm}^3$$

c.
$$V = \frac{1}{3} s^2 h$$

$$= \frac{1}{3} (6)^2 (8)$$

$$= 96 \text{ m}^3$$

d.
$$V = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi (5)^3$$

$$= \frac{500\pi}{3}$$

$$= 523.599 \text{ ft}^3$$

e. Hemisphere

$$V = \frac{4}{3} \pi r^3 \div 2$$

$$= \frac{4}{3} \pi (6)^3 \div 2$$

$$= 144\pi$$

$$= 452.389$$
Cone

$$V = \frac{1}{3} \pi r^2 h$$

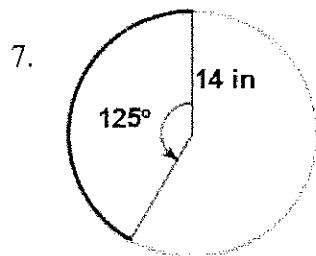
$$= \frac{1}{3} \pi (6)^2 (14)$$

$$= 168\pi$$

$$= 527.788$$

$$452.389 + 527.788$$

$$= 980.177 \text{ cm}^3$$



- a. Find the length of the arc where the central angle is 125° .
- b. Find the area of the sector for the 125° region
- $$\frac{\pi r^2 \theta}{360} = \frac{\pi (14)^2 (125)}{360} = \frac{1225\pi}{18} = 213.803 \text{ in}^2$$