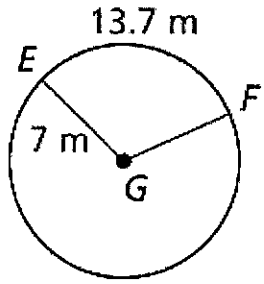
Name: key Date: Period:

HW #11-5: Quest #1 Review

Check answers on Edline. Remember to include your units!

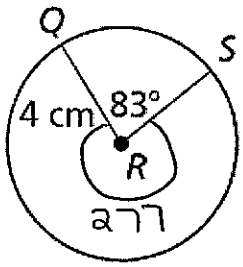
1. Find $m\widehat{EF}$



$\frac{13.7}{2\pi(7)} = \frac{x}{360}$

$x = \frac{4932}{14\pi} = \frac{2466^\circ}{7\pi} \approx 112.14^\circ$

2. Find the arc length of the major arc $\widehat{QS}$



$\frac{277}{360} = \frac{x}{2\pi(4)}$

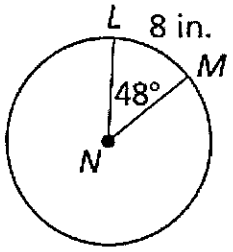
$360x = 2216\pi$

$x = \frac{2216\pi}{360} = \frac{554\pi}{90}$

$= \frac{277\pi}{45}$ cm

≈ 19.34 cm

3. Find the circumference of $\odot N$. Then find the length of its radius.



$\frac{8}{\text{circumf}} = \frac{48}{360}$ 15

$2(\text{circumf}) = 120$

circumf. = 60 in

$2\pi r = 60$

$r = \frac{30}{\pi}$ in ≈ 9.55 in

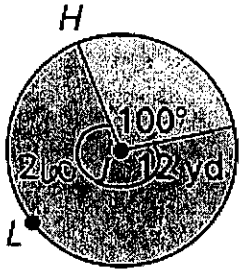
4. Convert 26° to radians.

$13\cancel{26} \times \frac{1\cancel{2}\pi}{\cancel{360}\ 90} = \frac{13\pi}{90}$

5. Convert $\frac{5\pi}{9}$ radians to degrees

$\frac{5\cancel{\pi}}{\cancel{9}} \times \frac{\cancel{360}\ \cancel{40}\ 20}{\cancel{2\pi}} = 100^\circ$

6. Find the area of the small sector. Then find the area of the large sector.



Small:

$\frac{5\cancel{100}}{18\cancel{360}} = \frac{x}{\pi(12)^2}$

$18x = 720\pi$

$x = 40\pi$ yd^2

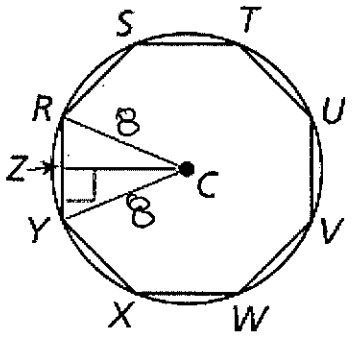
large

$\frac{13\cancel{260}}{18\cancel{360}} = \frac{x}{\pi(12)^2}$

$18x = 1872\pi$

$x = 104\pi$ yd^2

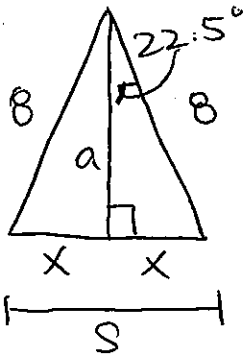
Use the diagram for #7-9



7. Identify the following:
   a. Center: C
   b. A radius: $\overline{RC}$
   c. An apothem: $\overline{CZ}$
   d. A central angle: $\angle RCY$

8. Find the following:
   a. $m\angle RCY =$ 45°
   b. $m\angle RCZ =$ 22.5°
   c. $m\angle ZRC =$ 67.5°

9. The radius of the circle is 8 units. Find the area of the octagon.



$\cos(22.5) = \frac{a}{8}$

$a \approx 7.39$

$\sin(22.5) = \frac{x}{8}$

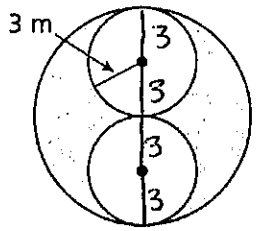
$x \approx 3.06$

$s \approx 2(3.06) \approx 6.12$

$A = \frac{1}{2}(7.39)(6.12)(8)$

$A \approx 180.99 \text{ units}^2$

10. The two white congruent just fit into the dark circle. What is the area of the dark region?

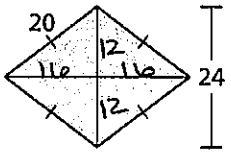


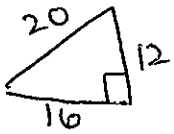
dark − 2 small

$\pi(6)^2 - 2(\pi(3)^2)$

$36\pi - 18\pi = 18\pi \text{ m}^2$

11. Find the area of the rhombus.

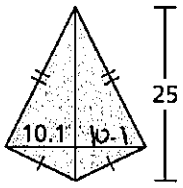




$A = \frac{1}{2}(24)(32)$

$A = 384 \text{ units}^2$

12. Find the area of the kite.



$A = \frac{1}{2}(25)(20.2)$

$A = 252.5 \text{ units}^2$