NAME Answer Key DATE _____ SCORE _____

Lessons 11-5, 11-6

Practice 44
Supplementary Practice

Find the circumference and area. Leave each answer in terms of π.

1. $r = 6$

$C =$ 12π

$A =$ 36π

2. $d = 10$

$C =$ 10π

$A =$ 25π

$C = \frac{2}{1}\left(\frac{22}{7}\right)\left(\frac{14}{11}\right) = \frac{8}{1}$

$A = \left(\frac{22}{7}\right)\left(\frac{14}{11}\right)\left(\frac{14}{11}\right) = \frac{56}{11}$

3. Find the circumference and area, correct to the nearest tenth, of a circle with diameter 4.2. Use $\pi \approx 3.14$.

$C =$ 13.2, $A =$ 13.8

skip X

4. Find the circumference and area of a circle with radius $1\frac{3}{11}$. Use $\pi \approx \frac{22}{7}$.

$C =$ 8, $A =$ $56/11$

5. The area of a circle is 48π. Find the circumference. $8\sqrt{3}\cdot\pi$

$A = \pi r^2$

$48\pi = \pi r^2$

$r = \sqrt{48}$

$r = 4\sqrt{3}$

6. The area of sector AOB is 36π and $m\angle AOB = 40$. Find the radius of $\odot O$. $r = 18$

$36\pi = \frac{40}{360}\cdot \pi r^2$

$324 = r^2$

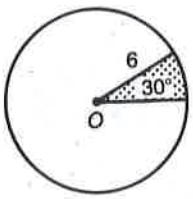
$r = 18$

7. A dog's leash is tied to a post in the ground, leaving the dog free to roam over a circular region. If the leash is 6.5 m long, find the area of the region to the nearest square meter. Use $\pi \approx 3.14$.

133 m $\quad \pi(6.5)^2$

In Exercises 8 and 9, O is the center of the circle. Find the arc length and area of each shaded sector.

8.



$\frac{30}{360}\cdot 2\pi(6)$

$\frac{12\pi}{12} = \pi$

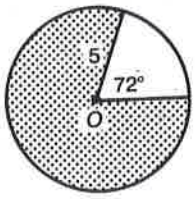
$\frac{30}{360}\cdot \pi(6)^2$

$\frac{36\pi}{12}$

arc length = π

area = 3π

9.



$\frac{288}{360}\cdot 2\pi(5)$

$\frac{40\pi}{5} = 8\pi$

major arc length = 8π

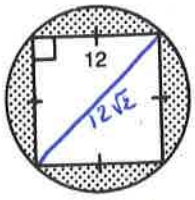
area = 20π

$\frac{288}{360}\cdot \pi(5)^2$

$\frac{100\pi}{5}$

Find the area of each shaded region. In Exercise 11, O is the center of the circle.

10.



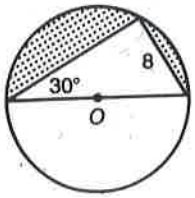
$A_c = \pi(6\sqrt{2})^2$

$= 72\pi$

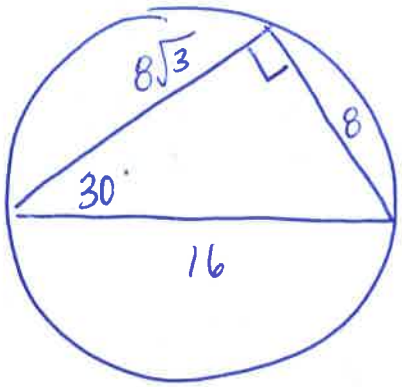
$A_s = 144$

area = $72\pi - 144$

11.



area = _____



$A_{circle} = \pi(8)^2 = \frac{64\pi}{2} = 32\pi$

$A_{triangle} = \frac{1}{2}(8)(8\sqrt{3}) = 32\sqrt{3}$

Shaded Region $= 32\pi - 32\sqrt{3}$