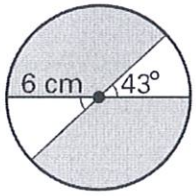
Geometry
11.2 Irregular Areas Practice

Name: Key
Date: _____ Period: _____

**Find the shaded area in each of the following figures.**

**1.** .

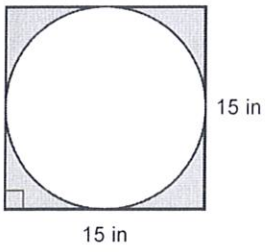



180 − 43 = 137

$A = \frac{137}{360} \cdot \pi(6)^2 = 43.04$

$2A = 86.08\ cm^2$

**2.**

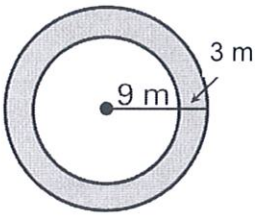



$A_{\square} = (15)^2 = 225$

$- A_{\circ} = \pi(15/2)^2 = 176.71$

$A_{SHADED} = 48.29\ in^2$

**3.** .

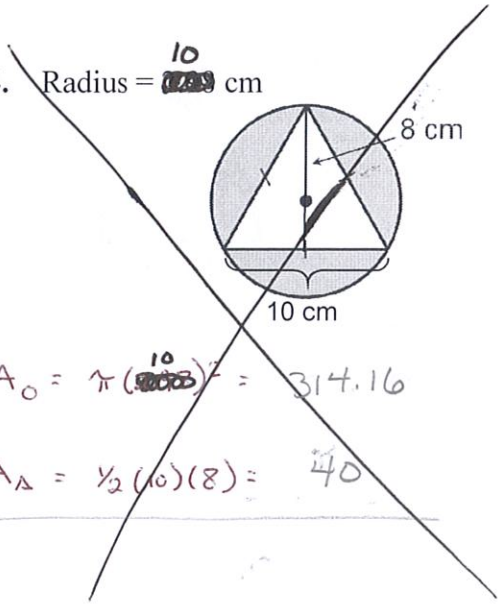



$A_{BIG} = \pi(12)^2 = 144\pi$

$- A_{SM} = \pi(9)^2 = 81\pi$

$A_{SHADED} = 63\pi = 197.92\ m^2$

**4.** Radius = ~~10~~ cm




$A_{\circ} = \pi(\frac{10}{2})^2 = 314.16$

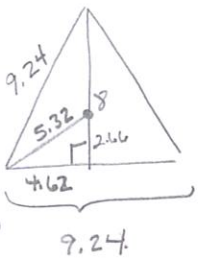
$A_{\triangle} = \frac{1}{2}(10)(8) = 40$

$r = 5.32$

$A_{\circ} = (5.32)^2\pi = 88.91$

$-A_{\triangle} = \frac{1}{2}(9.24)(8) = 36.96$

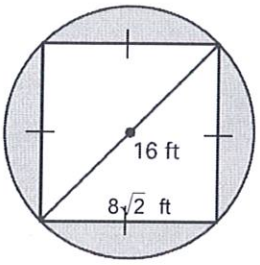
$A_{SH} = 51.95\ cm^2$




$\frac{8}{\sqrt{3}} = 4.61$

$\frac{4.61}{\sqrt{3}} = 2.66$

**5.** .

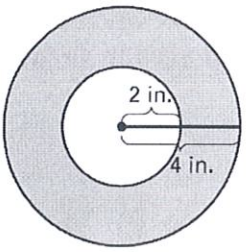



$A_{\circ} = \pi(8)^2 = 201.06$

$- A_{\square} = (8\sqrt{2})^2 = 128$

$A_{SHADED} = 73.06\ ft^2$

**6.**

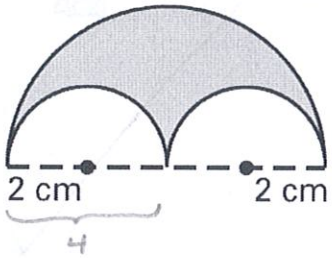



$A_{BIG} = \pi(4)^2 = 50.27$

$- A_{SM} = \pi(2)^2 = 12.57$

$A_{SHADED} = 37.7\ in^2$

**7.** Find the shaded area inside the semi circle.

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$A_{BIG} = \frac{1}{2}(\pi)(4)^2 = 25.13$

$- A_{SM} = \pi(2)^2 = 12.57$

$A_{SHADED} = 12.56\ cm^2$