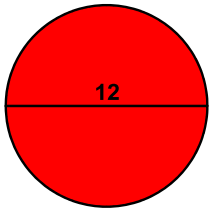
The diameter of this circle is 12 cm. Find its area.



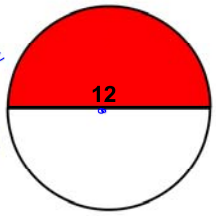
$A = \pi r^2$
$A = \pi \cdot 6^2 = 36\pi \, u^2$

A = ?

$A = 113.1 \, u^2$

Give your answer in terms of π.

What is the area of each semi-circle (in terms of π)?



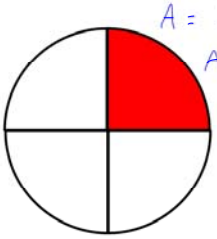
fraction shaded → $\frac{180^\circ}{360^\circ}$ ← whole ⊙

$A = \frac{180^\circ}{360^\circ} \cdot \pi \cdot 6^2$

$A = \frac{1}{2}\pi \cdot 36$

$A = 18\pi \approx 56.5 \, u^2$

What is the area of a quarter-circle (in terms of π)?



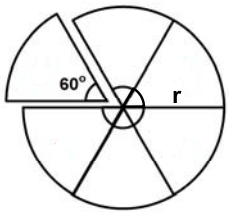
$A = \frac{90^\circ}{360^\circ} \cdot \pi \cdot 6^2$

$A = \frac{1}{4} \cdot \pi \cdot 36$

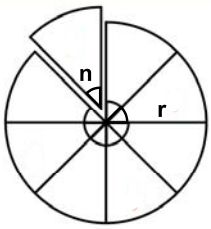
$A = 9\pi \approx 28.3 \, u^2$

12 is still the diameter

The area of the sector of a circle

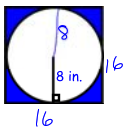


$A = \frac{60}{360} \pi r^2$



$A = \frac{n}{360} \pi r^2$

Additional Examples- find shaded area

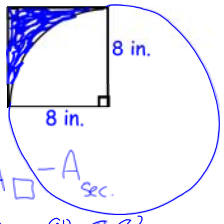


$A_{\square} - A_{\odot}$

$16 \cdot 16 - \pi \cdot 8^2$

$256 - 64\pi$

$A = 54.9\ in^2$



$A_{\square} - A_{sec.}$

$8 \cdot 8 - \frac{90}{360} \cdot \pi \cdot 8^2$

$64 - 16\pi \approx 13.7\ in^2$