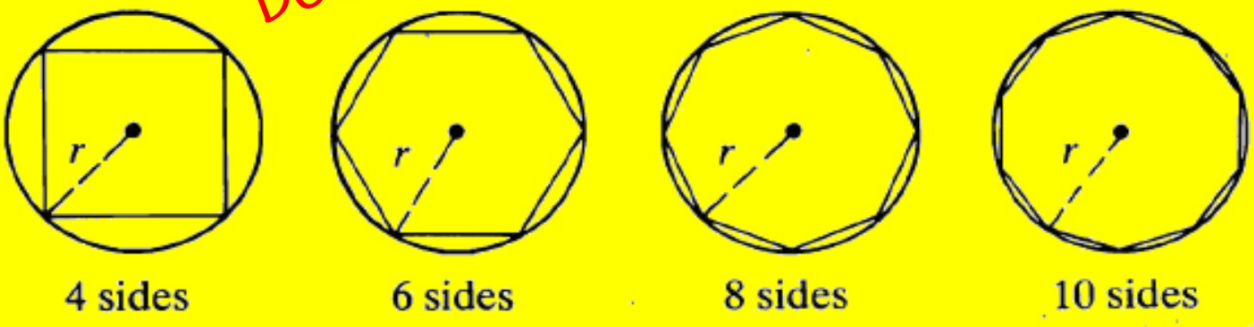
DO NOT COPY THIS



Circumference of a circle: the "limit" of the perimeters of inscribed regular polygons

Area of a circle: the "limit" of the areas of inscribed regular polygons

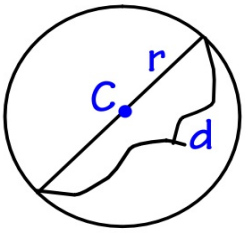
11-5
Circles

March 8

std. 10.0

Circumference of a circle: $C = 2\pi r$ or $C = \pi d$

Area of a circle: $A = \pi r^2$



1 diameter = $4\sqrt{3}$

Find circumference and area in terms of π.

$C = \pi d$
$= \pi 4\sqrt{3}$
$= 4\sqrt{3}\pi$ units

$A = \pi r^2$
$= \pi (2\sqrt{3})^2$
$= 4 \cdot 3\pi$
$= 12\pi u^2$

2 The diameter of a circle is 7 ft. Find the circumference and area. Use $\frac{22}{7}$ for π.

$d = 7$

$C = \pi d$

$= \frac{22}{7} \cdot 7$

$C = 22 \text{ ft}$

$A = \pi r^2$

$= \frac{22}{7}\left(\frac{7}{2}\right)^2$

$= \frac{22}{7}\left(\frac{7}{2}\right)\left(\frac{7}{2}\right)$

$= \frac{77}{2} \text{ ft}^2$

3 Area of circle = 100π.
Find the radius and circumference.

$A = \pi r^2$

$\frac{100\pi}{\pi} = \frac{\pi r^2}{\pi}$

$r = 10$

$C = 2\pi r$

$2(\pi)(10)$

20π units