Panel 1:

→ radius - from center to a point on the circle

→ diameter - segment that connects two points on the circle _and_ goes through the center

Panel 2:

10.3 Circumference of a Circle

(Perimeter in a circle)

Every circle has a common ratio (compare two numbers) of the same unit

$$\frac{C}{d} = \pi$$

CC

Panel 3:

π (pi)   3.14159
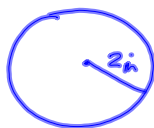
Nonterminating Nonrepeating decimal

We use 2 values

3.14 , $\frac{22}{7}$

3   3.2

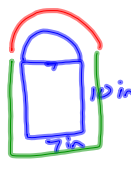**Panel 4:**

Circumference

$$C = \pi d \qquad d = 2r$$

$$C = 2\pi r$$

Panel 5:

$C = 2(3.14)(2)$

$C = 6.28(2)$

$C = 12.56$ in

Panel 6:

$C = \left(\frac{22}{7}\right)\left(14^2\right)$

$C = 22(2)$

$C = 44$ cm

Perimeter of the Jukebox

10 in
7 in

$10 + 10 + 7 = 27$
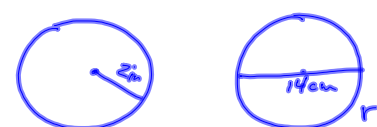
$\frac{1}{2}C = \frac{1}{2}\left(\frac{22}{7}\right)(7)$
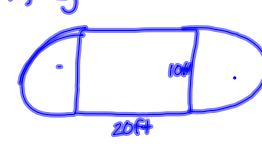
$= 11$

38 in

10.4 Area of a Circle

Change the formula

Area of a circle is pi times the radius squared

$$A = \pi r^2$$

---

2 in

14 cm
r = 7

$A = \pi r^2$
$A = (3.14)(2^2)$
$A = 3.14(4)$
$A = 12.56 \text{ in}^2$

$A = \left(\frac{22}{7}\right)(7^2)$
$A = \left(\frac{22}{7}\right)(49)$
$A = 22 \cdot 7$
$A = 154 \text{ cm}^2$

Regions

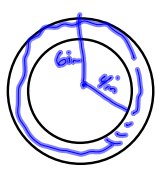A circle r = 5
$A = (3.14)(5^2)$
$A = 3.14 \cdot 25$
$A = 78.5 A^2$

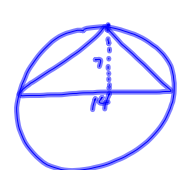10ft
20ft

$A = 20 \cdot 10$
$= 200 \text{ ft}^2$

278.5 ft^2

p.5

---

6 in
8 in

Area of total
- Area of opening

$A = \pi(6^2) \quad 36\pi$
$- A = \pi(4^2) - 16\pi$
$\overline{\qquad\qquad\quad 20\pi}$

Shaded region

113.04
$-\ 50.24$
$\overline{62.80 \text{ in}^2}$

62.8 in^2

7
14

P 527-528   2-22 even
534-535   2-30 even