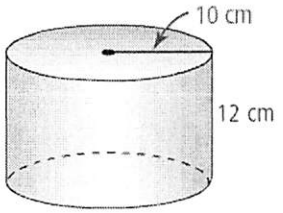
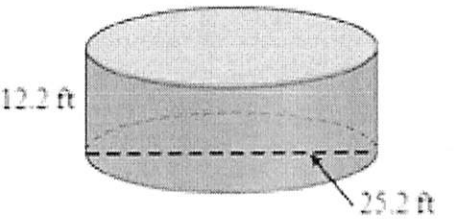
Volume of Cylinders Practice Name _____

Show All Work – Formula, Substitute, Solve with Label $V = \pi \bullet r^2 \bullet h$

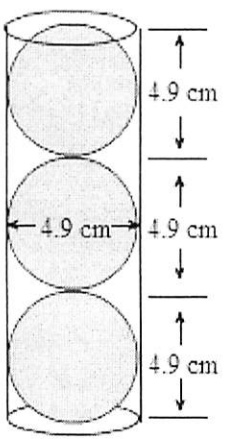
1. Find the Volume of the Following Cylinders to the *nearest tenth.*





2. Find the height of a cylinder with a volume of 124 cubic inches and a radius of 3inches Round *to the nearest tenth.*

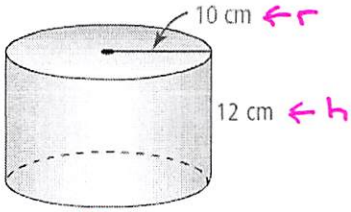
3. Toy rubber balls are packaged in a cylinder that holds 3 balls. The diameter of each ball is 4.9 cm. Find the Volume of the cylinder *in terms of* π.



Volume of Cylinders Practice Name Key

Show All Work – Formula, Substitute, Solve with Label $V = \pi \cdot r^2 \cdot h$

1. Find the Volume of the Following Cylinders to the *nearest tenth.*

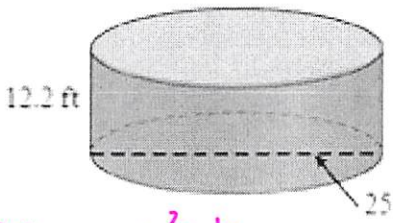


F: $V = \pi \cdot r^2 \cdot h$

S: $V = \pi \cdot 10^2 \cdot 12$

S: $V = 1200 \cdot \pi$

$V = 3769.9 \text{ cm}^3$



r = 12.6

F: $V = \pi \cdot r^2 \cdot h$

S: $V = \pi \cdot (12.6)^2 \cdot 12.2$

S: $V = 6084.9 \text{ ft}^3$

2. Find the height of a cylinder with a volume of 124 cubic inches and a radius of 3inches Round *to the nearest tenth.*

F: $V = \pi \cdot r^2 \cdot h$

h = ?

$V = 124 \text{ in}^3$

r = 3 in

S: $\frac{124}{\pi} = \frac{\pi \cdot 3^2 \cdot h}{\pi}$

$\frac{39.47}{9} = \frac{9 \cdot h}{9}$

$4.4 = h$

$h = 4.4 \text{ in.}$

3. Toy rubber balls are packaged in a cylinder that holds 3 balls. The diameter of each ball is 4.9 cm. Find the Volume of the cylinder *in terms of π.*

$V = \pi \cdot r^2 \cdot h$

$V = \pi \cdot (2.45)^2 \cdot (14.7)$

$V = 88.2\pi \text{ cm}^3$

d = 4.9 cm

r = 2.45 cm

H = 14.7 cm