

4-3-14
5th Geo

10-3 SOL

(13) Cone
slant = 10
lateral area = 60π

$$L.A = \pi r \cdot \text{slant}$$

$$\frac{60\pi}{10\pi} = \frac{\pi \cdot r \cdot 10}{\pi \cdot 10}$$

$$6 = r$$

Sphere's $V = ?$

$$V = \frac{4}{3}\pi r^3$$

$$= \frac{4}{3}\pi \cdot 6^3$$

$$= 288\pi$$

Plastic Ball

(12) Sphere

$$S.A. = 196\pi$$

$$S.A. = 4\pi r^2$$

$$\frac{196\pi}{4\pi} = \frac{4\pi r^2}{4\pi}$$

$$49 = r^2$$

$$7 = r$$

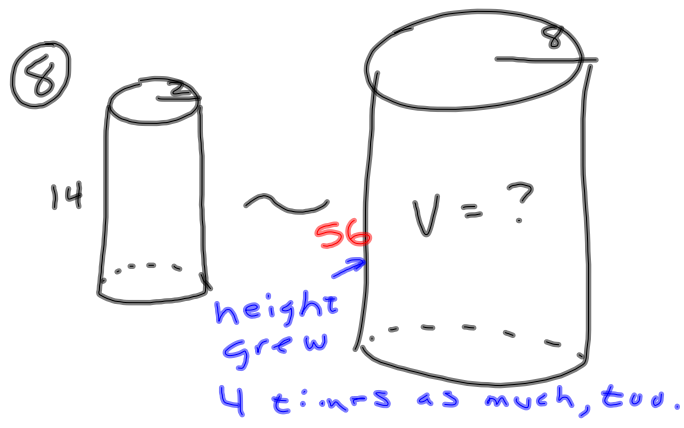
Sponge Ball

Sphere

$$S.A. = 4\pi r^2$$

$$= 4\pi \cdot 14^2$$

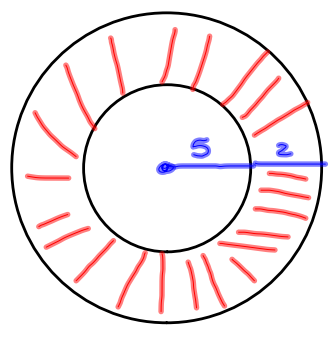
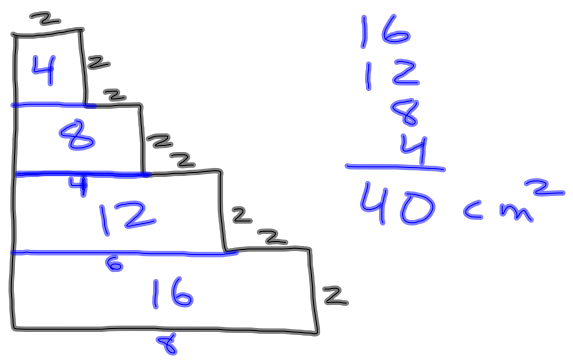
$$= 784\pi$$



$$\begin{aligned}
 V &= \pi r^2 h \\
 &= \pi \cdot 8^2 \cdot 56 \\
 &= 3584 \pi \text{ units}^3
 \end{aligned}$$

New practice

Find area



Whole - hole

$$\begin{aligned}
 \pi r^2 &- \pi r^2 \\
 \pi \cdot 7^2 &- \pi \cdot 5^2 \\
 49\pi &- 25\pi \\
 24\pi &
 \end{aligned}$$

A basketball has a surface area of 16π . What is its radius?

Sphere

$$S.A. = 4\pi r^2$$

$$\downarrow$$
$$\frac{16\pi}{4\pi} = \frac{4\pi}{4\pi} \cdot r^2$$

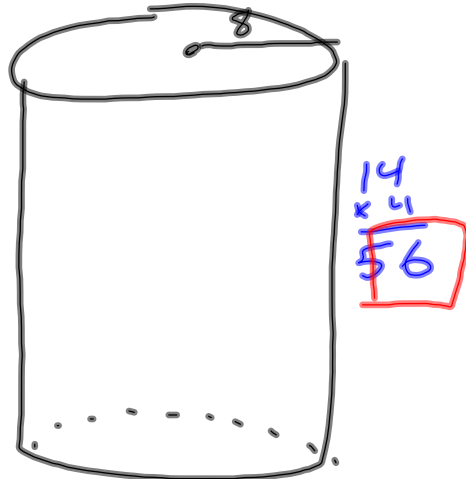
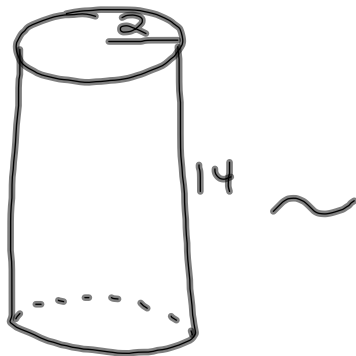
$$\sqrt{4} = \sqrt{r^2}$$

$$2 = r$$

4-3-14
6th Geo

10-3 SOL questions

8



$V = ?$

$$V = \pi r^2 \cdot h$$
$$= \pi \cdot 8^2 \cdot 56$$

$$= \pi 64 \cdot 56$$

$$3584 \pi$$

13 Cone

$$\text{slant} = 10$$

$$L.A. = 60 \pi$$

$$L.A. = \text{slant} \cdot \pi \cdot r$$

$$\frac{60 \pi}{10 \pi} = \frac{10 \pi r}{10 \pi}$$

$$6 = r$$

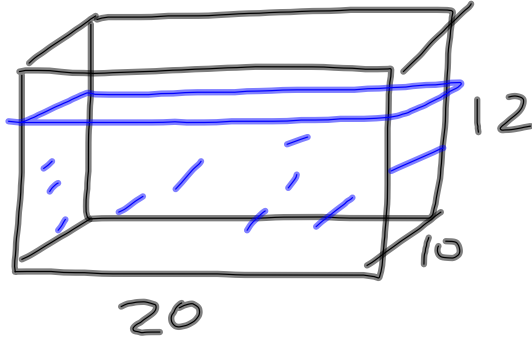
Sphere

$$V = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi \cdot 6^3$$

$$= 288 \pi$$

④



$$V = 2400$$

$$\frac{4}{5} \cdot 2400 = 1920 \text{ in}^3$$

⑫

plastic ball

$$S.A. = 4\pi r^2$$

$$\downarrow$$

$$\frac{196\pi = 4\pi r^2}{4\pi \quad 4\pi}$$

$$\sqrt{49} = \sqrt{r^2}$$

$$r = 7$$

$r = 14$
since
it
is
doubled

Sponge Ball

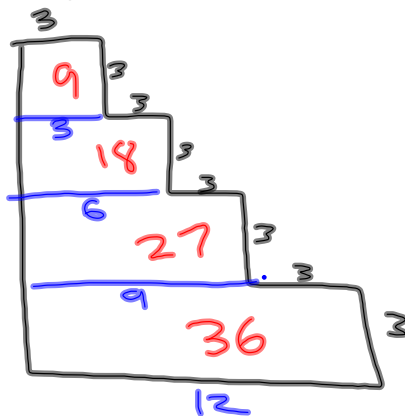
$$S.A. = 4\pi r^2$$

$$S.A. = 4 \cdot \pi \cdot 14^2$$

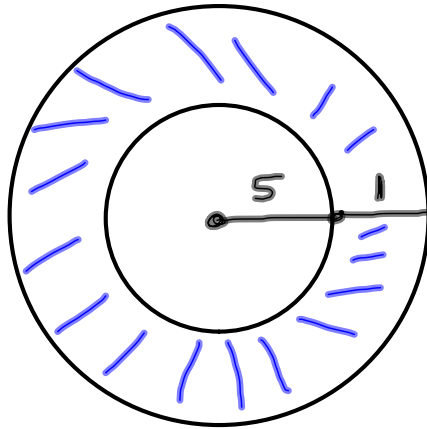
$$S.A. = 784\pi$$

New practice

Find area



$$90 \text{ cm}^2$$



whole - hole

$$\pi r^2 - \pi r^2$$

$$\pi \cdot 6^2 - \pi \cdot 5^2$$

$$36\pi - 25\pi$$

$$11\pi \quad (34.6)$$

The surface area of a basketball is 36π .
 what is its volume?

$$S.A. = 4\pi r^2$$

$$\downarrow$$

$$\frac{36\pi}{4\pi} = \frac{4\pi r^2}{4\pi}$$

$$9 = r^2$$

$$r = 3$$

$$V = \frac{4}{3}\pi r^3$$

$$= \frac{4}{3}\pi 3^3$$

$$= 36\pi$$