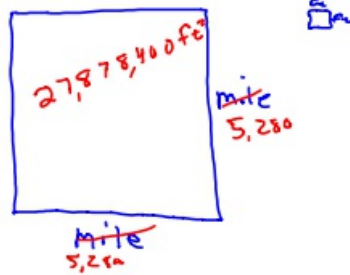
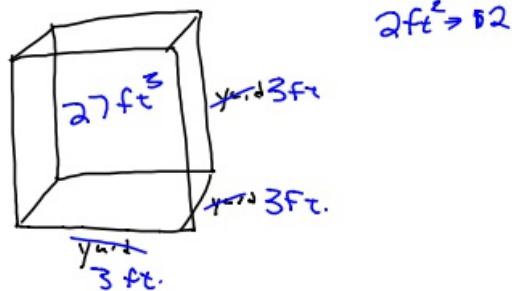


2-27-18 5th Geo

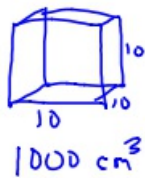
- ① How many square feet are in a square mile?



- ② How many cubic feet are in a cubic yard?



- ③ How many cubes that are 2 cm on each side will fit into a cube that is 10 cm on each side?



2
2
2
2 cm³

$$\frac{1000}{8} = 125$$

- ④ A dog is tied to a 20 foot rope. How much grass will it kill in the next month?



$$\begin{aligned}
 A &= \pi r^2 \\
 &= \pi \cdot 20^2 \\
 &= 400\pi \\
 &\approx 1256.6 \text{ ft}^2
 \end{aligned}$$

- ⑤ The volume of a ball is about 24,000 cm³. What is the radius of the ball?

$$\begin{aligned}
 V &= \frac{4}{3} \pi r^3 \\
 \frac{3}{4} \cdot 24,000 &= \frac{3}{4} \cdot \frac{4}{3} \cdot \pi \cdot r^3 \\
 18,000 &= \pi \cdot r^3 \\
 \frac{18,000}{\pi} &= \frac{\pi \cdot r^3}{\pi} \\
 \sqrt[3]{5729...} &= \sqrt[3]{r^3} \\
 r &\approx 17.9
 \end{aligned}$$

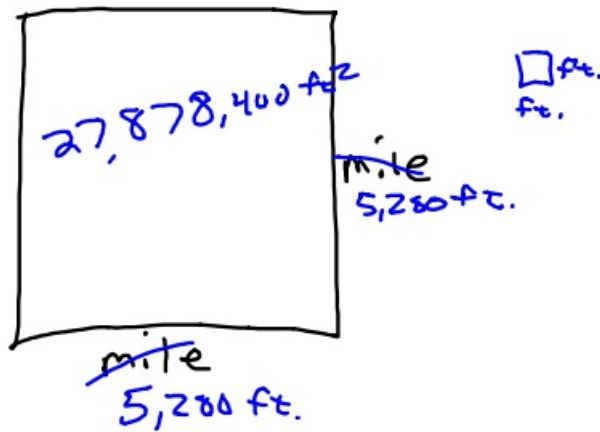
- ⑥  Area of shaded region

$$\begin{aligned}
 \text{Whole} - \text{hole} \\
 \pi \cdot 5^2 - \pi \cdot 3^2 \\
 64\pi - 9\pi
 \end{aligned}$$

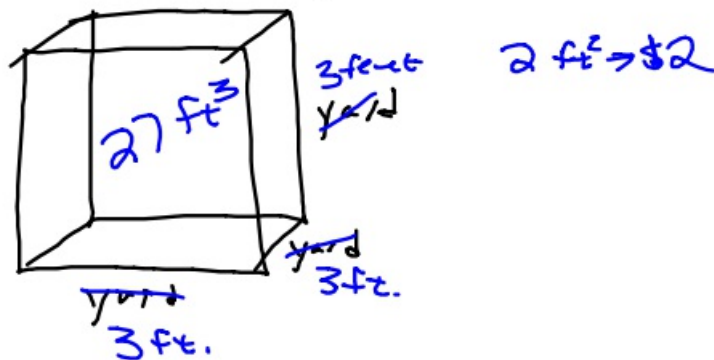
$$\begin{aligned}
 55\pi &\leftarrow \text{exact answer} \\
 &\approx 172.8 \text{ cm}^2
 \end{aligned}$$

2-27-18 6th Geo

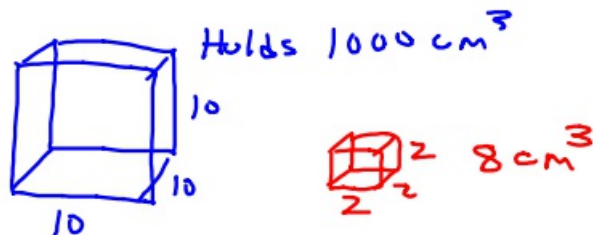
- ① How many square feet are in a square mile?



- ② How many cubic feet are in a cubic yard?



- ③ How many cubes that are 2 cm on an edge fit in a cube that is 10 cm on an edge?



$$\frac{1000}{8} = 125$$

④ A ball has a volume of $10,000 \text{ cm}^3$. What is the radius of the ball?

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

$$\frac{3}{4} \cdot 10,000 = \frac{3}{4} \cdot \frac{4}{3} \pi \cdot r^3$$

$$\frac{7,500}{\pi} = \frac{\pi \cdot r^3}{\pi}$$

$$\sqrt[3]{2387.3} = \sqrt[3]{r^3}$$

$$r \approx 13.3$$