

## READY FOR THE TEST???

- Page 268: #1 - 10

**Chapter 6 Surface Area, Volume, and Capacity, Practice Your New Skills.pdf**



- Sample Test

**Chapter 6 Sample Test.pdf**



**Chapter 6 Sample Test Answers.pdf**



## Worksheet

$$\begin{aligned} 8.a) \quad V &= \pi r^2 h \\ &= \pi (0.8)^2 (1.2) \\ &= 2.41 \text{ m}^3 \end{aligned}$$

$$\begin{aligned} b) \quad &\text{BILLARD BALL} \\ &d = 5.7 \text{ cm} \\ &= 0.057 \text{ m} \\ &r = 0.0285 \text{ m} \end{aligned}$$

$$\begin{aligned} V &= \frac{4}{3} \pi r^3 \\ &= \frac{4}{3} \pi (0.0285)^3 \\ &= 0.000097 \text{ m}^3 \end{aligned}$$

$$\begin{aligned} \# \text{ balls} &= \frac{2.41}{0.000097} \\ &= 24845 \text{ balls} \end{aligned}$$

Textbook p. 268

1. a) Ratio Volume to SA. of a cube length  $l$

$$\begin{aligned} V_{\text{cube}} &= lwh \\ &= lll \\ &= l^3 \end{aligned}$$

$$\begin{aligned} S.A. &= 2bh + 2bw + 2wh \\ &= 2ll + 2ll + 2ll \\ &= 2l^2 + 2l^2 + 2l^2 \\ &= 6l^2 \end{aligned}$$

$$\begin{aligned} \frac{V}{SA} &= \frac{l^3}{6l^2} \\ &= \frac{lll}{6ll} \\ &= \frac{l}{6} \end{aligned}$$

$\frac{2}{4}$

1. b) Volume to S.A. sphere with radius  $r$ .

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

$$SA = 4\pi r^2$$

$$\frac{V}{SA} = \frac{\frac{4}{3} \pi r^3}{4\pi r^2}$$
$$= \frac{r}{3}$$

$$\frac{4}{3} \div 4 \rightarrow \frac{4}{3} \times \frac{1}{4}$$

c) Sphere + Cube have same S.A.

$$A = 4\pi r^2 \text{ (sphere)}$$

$$A = 2l^2 + 2l^2 + 2l^2 \\ = 6l^2$$

$$\frac{6l^2}{6} = \frac{4\pi r^2}{6}$$

$$l^2 = \frac{4\pi r^2}{6}$$

$$l = \sqrt{\frac{2}{3}\pi} r \\ = 1.447r$$

Page 264 #1

$$V = lwh + \frac{lwh_2}{3}$$

$$= (53)(25)(30) + \frac{(53)(25)(15)}{3}$$

$$= 39750 + 6625$$

$$= 46375 \text{ cm}^3$$

## Attachments

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