

9.2.4

Hwk
9-87)

- a) Yes. Triangle base b) No. It is 2-dimensional
c) No. Base is not a polygon. d) Yes. "L" shaped prism

9-88)

- a) Volume of first layer is equal to the area of the base.

$$\text{Area of base} = 500 \text{ m}^2$$

$$\text{Vol of prism} = 5000 \text{ m}^3$$

$$\begin{aligned} \text{Vol} &= Bh \\ &= 500 \cdot 10 \\ &= \underline{5000 \text{ m}^3} \end{aligned}$$

$$SA = 2200 \text{ m}^2$$

$$6 \text{ faces} = 100 + 100 + 500 + 500 + 500 +$$

$$SA = \underline{2200 \text{ m}^2} \quad 500$$

- b) Volume of first layer is equal to area of the base

$$\text{Area of base} = \frac{1}{2} bh$$

$$= \frac{1}{2} 9 \cdot 9$$

$$= \frac{1}{2} 81$$

$$= 40.5 \text{ cm}^2$$

$$\text{Vol. of 1st layer} = \underline{40.5 \text{ cm}^2}$$

$$\text{Vol} = Bh$$


$$= 40.5 \cdot 8$$

$$= \underline{324 \text{ cm}^3}$$

$$SA = 72 + 72 + 101.6 + 40.5 + 40.5 =$$

$$\underline{326.6 \text{ cm}^2}$$

9-89)

a)  rectangle

b)  pentagon

9-90) $D = 17 \text{ mm}$ $r = 8.5 \text{ mm}$

$$\begin{aligned} A &= \pi \cdot r^2 \\ &= \pi \cdot (8.5)^2 \\ &= \pi \cdot 72.25 \end{aligned}$$

$$A = 72.25\pi \approx 226.87 \text{ mm}^2$$

$$\begin{aligned} C &= \pi \cdot d \\ &= 3.14 \cdot 17 \\ &= 53.55 \text{ m} \end{aligned}$$

9-91)

a) $P(\text{green}) = 1 - \frac{1}{3} = \frac{2}{3}$

$24 - 16 = 8$
total green red

b) $24 \cdot \frac{2}{3} = \frac{48}{3} = 16$ green marbles

c) $P(\text{red and red}) = \frac{1}{3} \cdot \frac{7}{23} = \frac{7}{69} \approx 10.1\%$
not replaced

d) $P(\text{red and red}) = \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{9}$
replaced

9-92) a) $\frac{108 \text{ miles}}{4.5 \text{ gal}} = \frac{24 \text{ miles}}{1 \text{ gal}} = 24 \text{ mpg}$

b) $\frac{17 \text{ oranges}}{\$3.23} = \frac{1 \text{ orange}}{0.194}$

c) $\frac{x}{12} = \frac{20}{30}$
 $\frac{30x}{30} = \frac{240}{30}$
 $x = 8$

d) $\frac{13}{40} = \frac{m}{100}$
 $\frac{1300}{40} = \frac{40m}{40}$
 $32.5 = m$