

9.2.2

HWK

9-65)

a) triangles



trapezoids



pentagons



b.) hexagon



9-66)

a) $2(4 \cdot 12) + 2(4 \cdot 3) + 2(12 \cdot 3) = 192 \text{ cm}^2$

b) cm^2 since 2 dimensions are multiplied.

c) area of the base \cdot height = volume
 $(12 \cdot 3) \cdot 4 = 144 \text{ cm}^3$

d) cm^3 since 3 dimensions are multiplied

9-67) Col $\overset{\bullet}{\text{---}} \overset{\bullet}{\text{Indianapolis}}$
 $1\frac{3}{4} \text{ in.}$

$$\frac{0.25 \text{ in}}{25 \text{ miles}} = \frac{1.75 \text{ in}}{x}$$

$$x = 175 \text{ miles} \quad \text{OR}$$

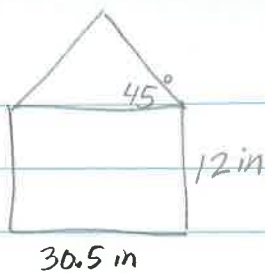
$$\frac{1 \text{ in}}{100 \text{ miles}} = \frac{1.75 \text{ inches}}{x}$$

$$x = 175 \text{ miles}$$

Scale

$$\frac{1\frac{3}{4} \text{ in}}{25 \text{ miles}}$$

9-68)



1 ft = 1 in

9-69)

a) $3\frac{1}{5} \cdot \frac{7}{4}$

$$\frac{16}{5} \cdot \frac{7}{4} = \frac{28}{5} = 5\frac{3}{5}$$

b) $5^3 \cdot (-\frac{4}{5})$

$$125 \cdot (-\frac{4}{5}) = \frac{25 \cdot 125}{1} \cdot (-\frac{4}{5}) = -\frac{100}{1} = -100$$

c) $2^4 \cdot \frac{5}{8}$

$$16 \cdot \frac{5}{8} = \frac{16}{1} \cdot \frac{5}{8} = 10$$

d) $-\frac{1}{2} \cdot 3^2$

$$-\frac{1}{2} \cdot 9 = -\frac{1}{2} \cdot \frac{9}{1} = -\frac{9}{2} = (-4\frac{1}{2})$$

e) $-\frac{5}{6} + (\frac{1}{2})^2$

$$-\frac{5}{6} + \frac{1}{4} = \frac{-20}{24} + \frac{6}{24} = \frac{-14}{24} = (-\frac{7}{12})$$

f) $(-\frac{4}{5})^2 - \frac{3}{50}$

$$\frac{16}{25} - \frac{3}{50} = \frac{32}{50} - \frac{3}{50} = \frac{29}{50}$$

g) $(\frac{3}{10})^2 - (-\frac{2}{5})^2$

$$\frac{9}{100} - \frac{4}{25} = \frac{9}{100} - \frac{16}{100} = (-\frac{7}{100})$$

h) $8^2(-\frac{7}{8}) - \frac{1}{2}$

$$64(-\frac{7}{8}) - \frac{1}{2} = \frac{64}{1} \cdot (-\frac{7}{8}) - \frac{1}{2} = -56 - \frac{1}{2} = -56\frac{1}{2}$$

9-70) $x+4 < 2x-3$

a) $x=4$

$$4+4 < 2(4)-3 \\ 8 < 8-3 \\ 8 < 5 \text{ NO}$$

b) $x=-2$

$$-2+4 < 2(-2)-3 \\ 2 < -4-3 \\ 2 < -7 \text{ NO}$$

c) $x=7$

$$7+4 < 2(7)-3 \\ 11 < 14-3 \text{ NO} \\ 11 < 11$$

d) $x=9$

$$9+4 < 2(9)-3 \\ 13 < 18-3 \\ 13 < 15 \text{ yes!}$$