

8.2.2.

HWK

8-66)

$$a) \frac{3^2 \cdot 5^3 \cdot 8}{3 \cdot 5^3 \cdot 8} = 3$$

$$b) (3x)^4 = 3^4 x^4 = 81x^4$$

$$c) 3^3 \cdot 3^5 \cdot \left(\frac{1}{3}\right)^2 = 3^8 \cdot \left(\frac{1}{3}\right)^2 = 729 \leftarrow$$

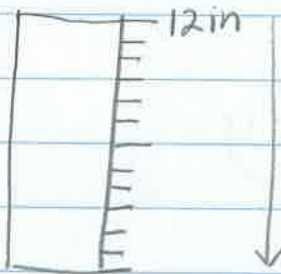
$6561 \cdot \frac{1}{9} = \frac{6561}{9} = 729$

$$d) \frac{7^4 \cdot 9^2}{9^3 \cdot 7^2} = \frac{7^2}{9}$$

8-67)

a) The association between the time the candle is lit and the height of the candle is a negative association.

b) 12 inches every 30 min will mean it will burn out in 6 hours.



$$12 \cdot 30 \text{ min} = 360 \text{ min} \div 60 \text{ min} = \underline{6 \text{ hours}}$$

8-68)

a) for  $3x+2 = x-2$  does  $x=0$

$$3(0)+2 = 0-2$$

$$2 = -2$$

**NO**

Solution is incorrect!

b) for  $3(x-2) = 30 + x - 2 - x + 2$  does  $x=12$ ?

$$3x - 6 = 30$$

$$3(12) - 6 = 30$$

$$36 - 6 = 30$$

$$30 = 30$$

**Yes**

Solution is correct!

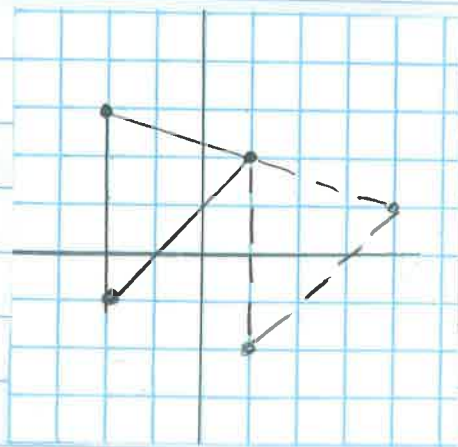
8-69)

$(-2, -1), (1, 2), (-2, 3)$

a)  $(1, -2), (4, 1), (1, 2)$

b)  $(-4, -2), (2, 4), (-4, 6)$

c)  $(2, -1), (-1, 2), (2, 3)$



8-70)

a)  $3(2x-1) + 2y = 5x$  for  $y$

$$6x - 3 + 2y = 5x$$

$$\begin{array}{r} -bx \\ \hline -3 + 2y = -x \\ +3 \qquad \qquad +3 \end{array}$$

$$\frac{2y}{2} = \frac{-x+3}{2}$$

$$y = -\frac{1}{2}x + \frac{3}{2}$$

$$b) \begin{array}{r} 600x + 200y = 500x \quad \text{for } x \\ -600x \qquad \qquad -600x \\ \hline \end{array}$$

$$\frac{200y}{-100} = \frac{-100x}{-100}$$

$$-2y = x$$

8-71)

a)  $0.183 > 0.18$

b)  $-13 > -17$

c)  $0.125 = \frac{1}{8}$

d)  $-6 < -4$

e)  $72\% < \frac{35}{30}$

f)  $-0.25 < -0.05$