

7.2.1

HWK

7-37)

This would be an example of a negative association because as the speed increases, the time it takes to drive a constant distance decreases.

7-38) $\begin{cases} \#1 = 5 \cdot \#2 \\ \#3 = \$1500 \end{cases}$ $\begin{matrix} \#1 = x \\ \#2 = 5x \end{matrix}$

$$x + 5x + 1500 = 13,500$$

$$6x + 1500 = 13,500$$

$$\begin{array}{r} -1500 \quad -1500 \\ \hline 6x = 12,000 \end{array}$$

$$\frac{6x}{6} = \frac{12,000}{6}$$

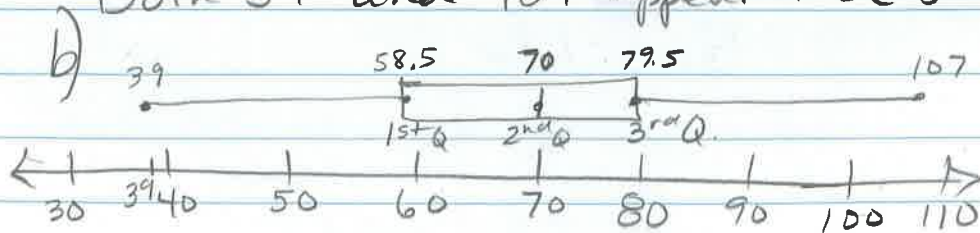
$$x = 2,000$$

1st painting = 2,000
2nd painting $5x \Rightarrow 5 \cdot 2,000 = \$10,000$
3rd painting = \$1,500

most expensive painting is \$10,000

7-39) a) Range is 68 (107-39)

Both 39 and 107 appear to be outliers



7-40)

a) scale factor B to A $\frac{30}{50} = \frac{3}{5}$

b)

$$\frac{50}{30} = \frac{y}{18}$$

$$\frac{30y}{30} = \frac{900}{30}$$

$$y = 30$$

$$\frac{5}{3} = \frac{15}{x}$$

$$\frac{5x}{5} = \frac{45}{5}$$

$$x = 9$$

7-41)

JUDY

IDA

a) $y = 20 + 6x$

$$y = 172 - 4x$$

x represents weeks, y represents total \$

b)

$$20 + 6x = 172 - 4x$$

$$\begin{array}{r} +4x \\ \hline \end{array}$$

$$20 + 10x = 172$$

$$\begin{array}{r} -20 \\ \hline \end{array}$$

$$\frac{10x}{10} = \frac{152}{10}$$

$$x = 15.2$$

between weeks 15 and 16 they will have the same amount.

7-42)

$$-\frac{3}{4} - \frac{2}{5}$$

(a)

$$-\frac{15}{20} - \frac{8}{20}$$

$$-\frac{15}{20} + \frac{-8}{20}$$

$$-\frac{23}{20} = -1\frac{3}{20}$$

(b)

$$\frac{7}{8} - \frac{2}{3}$$

$$\frac{21}{24} - \frac{16}{24}$$

$$\frac{5}{24}$$

$$\begin{aligned} \text{(c)} \quad & \frac{1}{3} - \frac{5}{6} \\ & \frac{2}{6} - \frac{5}{6} \\ & -\frac{3}{6} = -\frac{1}{2} \end{aligned}$$

$$\begin{aligned} \text{(d)} \quad & 1\frac{2}{3} + \left(-\frac{2}{5}\right) \\ & \frac{5}{3} + \left(-\frac{2}{5}\right) \\ & \frac{25}{15} + \frac{-6}{15} \\ & \frac{19}{15} = 1\frac{4}{5} \end{aligned}$$

$$\begin{aligned} \text{(e)} \quad & \frac{4}{7} - \left(-\frac{3}{8}\right) \\ & \frac{4}{7} + \frac{3}{8} \\ & \frac{32}{56} + \frac{21}{56} \\ & \frac{53}{56} \end{aligned}$$

$$\begin{aligned} \text{(f)} \quad & -4\frac{1}{2} + 3\frac{1}{9} \\ & -\frac{9}{2} + \frac{28}{9} \\ & -\frac{81}{18} + \frac{56}{18} \\ & \frac{-25}{18} = \left(-1\frac{7}{18}\right) \end{aligned}$$