

Pg 40 #15

High Tech: \$500 + 5% commission

Best Computers: \$400 + 7.5% commission

Let E represent her earnings in \$
Let S represent sales in \$

High Tech: ① $E = 500 + 0.05s$

Best Computers: ② $E = 400 + 0.075s$

At P.O.I. ① = ②

$$500 + 0.05s = 400 + 0.075s$$

$$500 - 400 = 0.075s - 0.05s$$

$$100 = 0.025s$$

$$\frac{100}{0.025} = s$$

$$s = 4000$$

∴ If she hopes to sell more than \$4000 choose Best Computers.

Pg 40 #17.

Let n represent the # of nickels

Let d represent the # of dimes

Let q represent the # of quarters

$$\textcircled{1} \quad n + d + q = 49$$

$$\textcircled{2} \quad 0.05n + 0.10d + 0.25q = 5.20$$

$$d = n + q + 5$$

$$\textcircled{d-5} = n + q \quad \textcircled{3}$$

$$\textcircled{1} \quad d + n + q = 49$$

$$d + d - 5 = 49$$

$$2d - 5 = 49$$

$$2d = 49 + 5$$

$$2d = 54$$

$$d = \frac{54}{2}$$

$$d = 27$$

$$\textcircled{1} n + d + q = 49$$

$$n + 27 + q = 49$$

$$n + q = 49 - 27$$

$$\textcircled{1} n + q = 22$$

$$\textcircled{2} 0.05n + 0.10d + 0.25q = 5.20$$

$$0.05n + 0.10(27) + 0.25q = 5.20$$

$$0.05n + 2.70 + 0.25q = 5.20$$

$$0.05n + 0.25q = 5.20 - 2.70$$

$$\textcircled{2} 0.05n + 0.25q = 2.50$$

$$\rightarrow n = 22 - q \quad \textcircled{3}$$

$$0.05(22 - q) + 0.25q = 2.50$$

$$1.1 - 0.05q + 0.25q = 2.50$$

$$0.2q = 2.50 - 1.10$$

$$0.2q = 1.40$$

$$q = \frac{1.40}{0.2}$$

$$q = 7$$

$$n + q = 22$$

$$n + 7 = 22$$

$$n = 15$$

∴ Jennifer has

15	nickels
27	dimes
7	quarters
<hr/>	
49	

Work

Pg. 39

#6, 7, 8
+ Elimination Note Website.