

# Word Problem 3 Key

1.  $X = .88 \times 1000 \Rightarrow \boxed{X = 880}$

2.  $\frac{28.6}{52} = \frac{X \cdot 52}{52} \Rightarrow X = .55$  or  $\boxed{55\%}$

3.  $\frac{126}{.35} = \frac{.35 \cdot X}{.35} \Rightarrow \boxed{X = 360}$

4.  $18,500 \times .08 = \$1480$  discount  
 $18,500 - 1480 = 17,020$  after discount (new price)

5.  $337 - 304 = 33$        $\frac{33}{337} = .0979...$       9.8% decrease

6.  $X + .03X = 55,620 \Rightarrow \frac{1.03X}{1.03} = \frac{55,620}{1.03} \Rightarrow X = \$54,000$

7.  $X \cdot 7 + 14 \cdot 4 = (X + 14) \cdot 5$

$7X + 56 = 5X + 70$

$\begin{array}{r} -5X \qquad -5X \\ \hline 2X + 56 = 70 \\ -56 \quad -56 \\ \hline 2X = 14 \end{array}$

$\rightarrow \frac{2X}{2} = \frac{14}{2}$

$\boxed{X = 7}$

7 lbs of \$7 coffee

8. US %      20.6%

Canada %      4.9%

W.E. %      26.5%

C.E.E.B.M.E./Af. %      22.4%

L.A. %      9.0%

A.P. %      16.6%

Total      100%

9.  $144 - 36 = 108$

$\frac{108}{36} = 3 \times 100\% \Rightarrow 300\%$  increase

10.  $.20X + 200 \cdot .5 = (X + 200) \cdot .3$

$\begin{array}{r} .2X + 100 = .3X + 60 \\ -.2X \qquad -.2X \\ \hline 40 = .1X \end{array}$

$\frac{100}{-60} = \frac{.1X + 60}{-60}$

$\frac{40}{.1} = \frac{.1X}{.1} \Rightarrow X = 400$

11.  $x - .44x = 1.9$

$$\frac{.56x}{.56} = \frac{1.9}{.56} \Rightarrow x = 3.4 \text{ kids}$$

②

12. no. the solution can only fall between the two that go into it.  
Stronger can increase the weaker acid, but weaker acid can only  
weaken the stronger one

13. yes.

14. yes. (tripling the price is a 200% increase). no. (100% is free).