

**LINEAR APPLICATION NOTES**

APPLICATION MEANS word problems

**STEPS TO SOLVE LINEAR APPLICATIONS**

1. Underline IMPORTANT INFORMATION
2. Draw A PICTURE
3. Pick A VARIABLE
4. Write THE EQUATION
5. SOLVE

EX #1: A sale at a local grocery store was offering all fruit at the same price per pound. Valencia bought 1.5 pounds of peaches and 3.5 pounds of plums. She used a 50 cents off coupon and ended up spending exactly \$5.00. What was the price per pound for the fruit that Valencia bought?

$$x - \text{lbs. } \$ \text{ per lb.}$$

$$1.5x + 3.5x - .5 = 5.00$$

$$5x - .5 = 5.00$$

$$+ .5 \quad + .5$$

$$\frac{5x}{5} = \frac{5.50}{5}$$

$$x = 1.10 \text{ per lb.}$$


EX #2: Rachael and Sabine belong to different local gyms. Rachael pays \$35 per month and a one-time registration fee of \$15. Sabine pays only \$25 per month but had to pay a \$75 registration fee. After how many months will Rachael and Sabine have spent the same amount on their gym memberships?

$x$  - months

$x = 6$  months

$$\begin{array}{r} \underline{R} \\ 35x + 15 \\ - 25x \\ \hline 10x + 15 = 75 \end{array} \quad = \quad \begin{array}{r} \underline{S} \\ 25x + 75 \\ - 25x \\ \hline 10x = 60 \end{array}$$

$$\begin{array}{r} 10x + 15 = 75 \\ - 15 \quad - 15 \\ \hline 10x = 60 \end{array}$$

$$\begin{array}{r} 10x = 60 \\ \hline 10 \quad 10 \\ \hline x = 6 \end{array}$$

