

SOL 7.4 Notes

Interest, Tax, Tip, & Discount

Interest:

Interest is an amount of money added to an account for the purpose of making money for a bank or company, or to make you money! There is a simple formula for calculating interest. It is $I = PRT$. I represents Interest, P represents Principil, R represents Rate and T represents Time. Principal, is the amount of money (\$\$\$) invested or borrowed. Rate is the percent being charged or applied to an account. (Remember to change percent to a decimal) Time is the amount of time represented in YEARS. (There is such a thing as half a year $\frac{1}{2}$ or 0.5, or even a quarter of a year $\frac{1}{4}$ or 0.25) To calculate interest we simply multiply principal times rate times time.

Example: Mrs. Warren bought her husband a Chevy Colorado pick-up truck for his birthday that cost \$15,000. If she borrows the \$15,000 at an interest rate of 5% for 5 years, how much interest will she pay back?

$$I = P \times R \times T$$

$$I = (P)15,000 \text{ (money borrowed)} \times (R) \underline{0.05} \text{ (5\% changed to a decimal)} \times (T) \underline{5} \text{ (time in years)}$$

$$\begin{array}{r} 15,000 \text{ (P)} \\ \times \underline{.05} \text{ (R)} \\ \hline 75000 \end{array}$$

$$\begin{array}{r} 750.00 \\ \times \underline{5} \text{ (T)} \\ \hline 3750.00 \end{array}$$

Reminder: 5% = 0.05

$$\begin{array}{r} 00000 \\ \hline 0750.00 \end{array}$$

$$0750.00$$

So the amount of interest is \$3,750.

Tax & Tip:

Tax is an amount of money added to an item for the purpose of making money. **Tax** is calculated by a certain percentage rate on purchased items. The percent of tax must be changed to a decimal to multiply the bill amount with the tax rate.

Example: Mrs. Urquhart took her children to Disney World for summer vacation, and purchased each daughter a souvenir T-shirt. Her total bill was \$48.00 plus 8% sales tax. How much was Mrs. Urquhart total including tax?

$$\text{Bill amount } \underline{\$48.00} \times \underline{0.08} \text{ (8\% tax changed to a decimal)} =$$

$$\begin{array}{r} 48 \\ \times \underline{.08} \\ \hline 384 \\ \hline 000 \\ \hline 3.84 \end{array}$$

So the amount of tax is \$3.84. Total bill = \$48.00 + \$3.84 (tax) = \$51.84

