## - Chapter <br> 多3 <br> $\odot$



A GRATUITY is a "tip"- a gift, usually in the form of money that you give someone in return for his or her service. We usually talk about tips and gratuity in regard to servers at restaurants. A COMMISSION is a fee paid to someone for his or her services in helping to sell something to a customer. We usually talk about commissions in regard to salespeople at stores. In both cases, how much you pay usually depends on the total cost of the meal or item you purchased. You can calculate gratuity and commission just like sales tax.

Again, the more your bill is, the more the gratuity or commission will bethey have a proportional relationship.


EXAMPLE OF GRATUITY: At the end of a meal, your server brings the final bill, which is $\$ 25$. You want to leave a 15\% gratuity. How much is the tip in dollars, and how much should you leave in total?

$$
\begin{aligned}
& 15 \%=0.15 \\
& \$ 25 \times 0.15=\$ 3.75
\end{aligned}
$$

The tip is $\$ 3.75$.

$$
\$ 25+3.75=\$ 28.75
$$

The total you should leave is $\$ 28.75$.

EXAMPLE OF COMMISSION: My sister got a summer job working at her favorite clothing store at the mall. Her boss agreed to pay $12 \%$ commission on her total sales. At the end of her first week, her sales totaled $\$ 3,500$. How much did she earn in commission?

$$
\begin{aligned}
& 12 \%=0.12 \\
& \$ 3,500 \times 0.12=\$ 420.00
\end{aligned}
$$

She earned $\$ 420$.

Alternative method: You can also solve these problems by setting up proportions, like this:

$$
\begin{aligned}
& \frac{12}{100}=3 \frac{x}{500} \\
& 100 x=42,000 \\
& x=\$ 420
\end{aligned}
$$

