

3.8 Solving Percentage Problems

Ex: A jacket costs \$48 and is on sale for 30% off.

- How much would you save?
- What is the final cost of the jacket?

What is 30% of \$48

convert into decimal $\rightarrow 30\% \times \48
 $\frac{30}{100} = 0.3$

$$0.3 \times 48 \quad \begin{array}{r} 48 \\ \times 0.3 \\ \hline 144 \end{array} \quad \boxed{\text{a) } \$14.40}$$

$$\begin{array}{r} 48.00 \\ \text{b) } -14.40 \\ \hline \$33.60 \end{array}$$

$$\boxed{\$33.60}$$

Estimate

30% is approx 25%

$$25\% = \frac{1}{4}$$

$$\frac{1}{4} \text{ of } \$48$$

$$\$12$$

Ex: A book costs \$9 and there is an 8% sales tax. What is the final sale price?

Estimate

$$8\% \rightarrow 10\% = \frac{10}{100} = \frac{1}{10}$$

$$\$9 \rightarrow 10$$

$$\frac{1}{10} \text{ of } \$10 = \boxed{\$1}$$

$$8\% \text{ of } \$9$$

$$8\% \times \$9$$

$$\frac{8}{100}$$

$$= 0.08 \times \$9$$

$$\begin{array}{r} 9 \\ \times 0.08 \\ \hline .72 \end{array}$$

$$\$0.72$$

$$\begin{array}{r} 9.00 \\ + 0.72 \\ \hline \end{array}$$

$$\boxed{\$9.72}$$