

7-4 Find Percent of a Number Mentally

$$\frac{\text{is}}{\text{of}} = \frac{P}{100}$$

equation

$$\frac{\text{is}}{\text{of}} = x$$

p.351

$$40\% \quad \frac{40}{100} = \frac{4}{10} = \frac{2}{5}$$

a.) 75% of 24

$$\frac{3}{4} \cdot \frac{24}{1} = 18$$

b.) 80% of 60 =

$$\frac{4}{5} \cdot \frac{60}{1} = 48$$

1 A.) 40% of 50

$$\frac{\cancel{2}}{\cancel{5}} \cdot \frac{\cancel{50}^0}{1} = 20$$
$$\frac{\cancel{8}}{\cancel{5}} \cdot \frac{50}{5} = 10$$

1 B.) $\boxed{30\%}$ of 70

$$\frac{10\% \text{ of } 70 = 7}{\times 3} = \frac{21}{30\%}$$
$$\frac{3}{10} \cdot \frac{70}{1} = 21$$

10% of 76

$$\frac{10}{100} = 0.1$$

left
↪

$$10\% \\ 0.1 \times 76 = 7.6$$

1% of 122

$$\frac{1}{100} = 0.01$$

left
↪

1% of 122

$$122 = 1.22$$

2A.) 10% of 42

$$\frac{10}{100} = \boxed{0.1} \quad \text{1 decimal}$$
$$42 = \boxed{4.2} \quad \text{1 decimal}$$

2B.) 1% of 264

$$\frac{1}{100} = \boxed{0.01} \quad \text{2 decimal}$$
$$264 = \boxed{2.64} \quad \text{2 decimal}$$

3.) original total discount
\$750.00

is $\frac{112.50}{750} = \frac{15}{100}$ %
of

$$750 \times (0.15) = 112.50$$

4. Estimate

a) 26% of 64

$$\frac{26}{100} \cdot \frac{1}{4} \cdot \frac{64}{1} = 16$$

b) $\frac{2}{3}\%$ of 891

$$\frac{2}{3} \div 100 = 0.66 = \frac{0.0066}{100} \times 900$$

$$\frac{2}{3} \times \frac{300}{100} = 600 = 6$$

c) 39% of 81

$$\begin{array}{l} 40 (80) \\ \frac{2}{3} \cdot \frac{81}{1} = \text{about } 32 \end{array}$$

d) 120% of 51

$$\begin{array}{l} 100\% \text{ of } 51 = 51 \\ 20\% \text{ of } 51 = \end{array}$$

$$10\% \text{ of } 51 = \frac{5.1}{2} \quad 10.2$$

Estimate

$$\begin{array}{r} 51.0 \\ + 10.2 \\ \hline 61.2 \end{array} \quad \text{about } 61$$

$$\begin{aligned}
 &4A.) \quad 92\% \text{ of } 50 \\
 &\quad \text{round } 90\% \text{ of } 50 \\
 &\quad = \frac{9}{10} \times \frac{50}{1} = \textcircled{45}
 \end{aligned}$$

$$\begin{aligned}
 &4C.) \quad 75\% \text{ of } 84 \\
 &\quad \text{round } \frac{3}{4} \times \frac{84}{1} = \textcircled{63}
 \end{aligned}$$

$$\begin{aligned}
 &4D.) \quad 130\% \text{ of } 91 \quad \text{round} \\
 &\quad \rightarrow 100\% \text{ of } 90 = 90 \\
 &\quad \frac{10\% \text{ of } 90 = 9}{\times 3} \quad \frac{9}{\times 3} \\
 &\quad \underline{30\%} \quad \underline{27}
 \end{aligned}$$

$$\begin{aligned}
 &4B.) \quad 63\% \text{ of } 205 \\
 &\quad \text{round } 60\% \\
 &\quad \frac{6}{10} \times \frac{200}{1} = \textcircled{120}
 \end{aligned}$$

Round both numbers!
My Goal: Something I can solve in my head.

$$\begin{array}{r}
 90 \\
 +27 \\
 \hline
 \textcircled{117}
 \end{array}$$

5.) \$48.61 15% tip

15% of 48.61
15% × 50.00

10% of 50 = +5.00
+ 5%

15%

+5.00
+2.50

\$7.50

#7) 30% of 40
 .10% of 40 = 4
 $\frac{\times 3}{30\%}$ $\times 3$
 12 completed

p. 353
 add
 #7 14

#14) 38% of 30
 round 40% of 30
 $\frac{4}{10}$ of $\frac{30}{1}$ = 12