Chapter 2 Test- Study Guide

① 138% of 250

$\downarrow$

$1.38 \times 250 = \boxed{345}$

② $\% = x \qquad \frac{P}{W} = \frac{\%}{100}$

$P = 8$

$W = 80 \qquad \frac{8}{80} = \frac{x}{100}$

$8 \cdot 100 = 80 \cdot x$

$\frac{800}{80} = \frac{80x}{80}$

$\boxed{10 = x}$

③ $\% = 24 \qquad \frac{P}{W} = \frac{\%}{100}$

$P = x$

$W = 25 \qquad \frac{x}{25} = \frac{24}{100}$

$25 \cdot 24 = 100 \cdot x$

$\frac{600}{100} = \frac{100x}{100}$

$\boxed{6 = x}$

④ ✱ Estimation

49% of 15

$\downarrow$

50% of 15

50% $\times$ 15

$\downarrow$

$0.50 \times 15 = \boxed{7.5}$

⑤ ✱ Estimation

$\frac{3}{4}$% of 387

$\downarrow$

0.75% of 387

$\downarrow$

$0.0075 \times 385 = 2.8 \approx \boxed{3}$

⑥ $\% = 74 \qquad part = \% \cdot W$

$P = x/n \qquad \boxed{n = 0.74 \cdot 58}$

$W = 58$

⑦ $\% = 89 \qquad P = \% \cdot W$

$P = 14 \qquad \boxed{14 = 0.89 \cdot n}$

$W = n$

⑧ $\% = 15 \qquad \frac{P}{W} = \frac{\%}{100}$

$P = 48$

$W = x \qquad \frac{48}{x} = \frac{15}{100}$

$48 \cdot 100 = 15 \cdot x$

$\frac{4800}{15} = \frac{15x}{15}$

$\boxed{\$320 = x}$

⑨ Bill = $14.50   20% → 0.20

Tip % = 20%   0.20 × 14.50 = $2.90

Tip = ?

⑩ Sale Price = $59.50
   Discount from Original = 15%
   Original Price = ?

$$\begin{array}{l} 100\% \\ -\ 15\% \\ \hline 85\% \end{array} \qquad \begin{array}{c} 85\% \\ \downarrow \\ 0.85 \end{array} \qquad 59.50 \div 0.85 = \boxed{\$70}$$

⑪ Percent of change $= \dfrac{new - original}{original} \times 100$

$O = 100$
$n = 150$

$$x = \frac{150 - 100}{100} \times 100$$

$$x = \frac{50}{100} \times 100$$

$$x = 0.50 \times 100$$

$$\boxed{x = 50\% ; \text{increase}}$$

⑫ $O = 300$ $x = \dfrac{200 - 300}{300} \times 100$
   $n = 200$

$$\boxed{33\% ; \text{decrease}}$$

$$x = \frac{-100}{300} \times 100$$

$$x = -0.\overline{33} \times 100$$

decrease! $x = -33.\overline{33}...$

Scanned by CamScanner

⑬ $o = 30$
$n = 90$

$$x = \frac{90-30}{30} \times 100$$

$$x = \frac{60}{30} \times 100$$

$$x = 2 \times 100$$

$$\boxed{x = 200\% \; ; \; increase}$$

⑭ Total cost = ___?___

$\$20 \times 0.15 = \$3 \rightarrow Tip$
$\$20 + \$3 = \boxed{\$23} \rightarrow Total \; cost$

⑮ $\$10 \times 0.05 = \$0.50 \rightarrow Tax$
$\$10 + \$0.50 = \boxed{\$10.50} \rightarrow Total \; cost$

⑯ $\$50 \times 0.10 = \$5 \rightarrow Markup$
$\$50 + \$5 = \boxed{\$55} \rightarrow Total \; cost$

⑰ $I = prt$

$I = I$
$p = 1000$
$r = 5\% \rightarrow 0.05$
$t = 2$

$I = 1000 \times 0.05 \times 2$
$$\boxed{I = \$100}$$

⑱
$I = I$ $r = 6\frac{1}{2}\%$ $t = 1$
                        6.5%
$p = 300$ 0.065

$I = prt$
$I = 300 \times 0.065 \times 1$
$$\boxed{I = \$19.50}$$

(19)

$$I = prt$$

$$I = 850 \times 0.04 \times \frac{1}{2}$$

$$\boxed{I = \$17}$$

$I = I$

$p = 850$

$r = 4\% \rightarrow 0.04$

$t = 6$ months

$\downarrow$

$\frac{6}{12} \rightarrow \frac{1}{2}$

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(20)

$$I = prt$$

$$I = 900 \times 0.06 \times 2$$

$$\boxed{I = \$108}$$

$I = I$

$p = 900$

$r = 6\% \rightarrow 0.06$

$t = 2$