

Warm-Up-Solve, check for reasonability

Chris Goodwin is a waiter and has sales of \$822.25 on Saturday. If this is 28.6% of his sales for the week, find his weekly sales.

$\$2875.$

$$0.286 \overline{) 822.250}$$

part = percent · whole

$$\frac{822.25}{0.286} = \frac{(\cancel{0.286}) \cdot x}{0.286}$$

= x

HW

17) 476 circuits is 70% of what # ?

$$\frac{476}{0.7} = \frac{(0.7) \cdot x}{0.7}$$

$$\begin{array}{r} \times 680. \\ 7 \overline{) 4760} \end{array}$$

21) what % of \$264 is \$330

$$\frac{\% \cdot 264}{264} = \frac{330}{264}$$

125%

6.6 Solving Percent Application Problems

Percent Equation $part = percent \cdot whole$

Sale Tax Formula $amount\ of\ sales\ tax = rate\ of\ tax \cdot cost\ of\ item$

Ex 1 Solving for Sales Tax

Office Max sells a flat panel display for \$299. If the sales tax rate is 5%, how much tax was paid? What was the total cost of the of flat panel display?

① $amount\ of\ sales\ tax = rate\ of\ tax \cdot cost\ of\ item$

$$x = (0.05)(299)$$

\$14.95 was paid in taxes ←

$$\begin{array}{r} 44 \\ 299 \\ \times 5 \\ \hline 1495 \end{array}$$

②

$$\begin{array}{r} 299.00 \\ + 14.95 \\ \hline 313.95 \end{array}$$

Line up the decimal when adding!

Ex 2 Finding the Sales Tax Rate

The sales tax on a \$14,500 Honda Civic is \$962. Find the rate of the sales tax.

$amount\ of\ tax = rate\ of\ tax \cdot original\ cost$

$$\frac{962}{14500} = x \cdot \frac{14500}{14500}$$

$$\begin{array}{r} xxx .066 \\ 14500 \overline{) 962.000} \\ - 87000 \downarrow \\ \hline 92000 \\ - 87000 \\ \hline \vdots \end{array}$$

$$\frac{96200}{14500}$$

$$\begin{array}{r} 33 \\ 145 \\ \times 7 \\ \hline 1015 \end{array} \quad \begin{array}{r} 23 \\ 145 \\ \times 6 \\ \hline 870 \end{array}$$

$x = 0.06\bar{6}$

6.6%

Percent Equation

$$\text{part} = \text{percent} \cdot \text{whole}$$

Commission Formula

$$\frac{\text{amount of commission}}{\text{amount of sales}} = \text{rate of commission}$$

Ex 3 Determining the Amount of Commission

Scott Samuels had pharmaceutical sales of \$42,500 last month. If his commission rate is 9%, find the amount of his commission.

$$\frac{\text{amount of commission}}{\text{amount of sales}} = \text{rate of commission}$$

$$X = 0.09 \cdot (42,500)$$

$$\begin{array}{r} 29 \\ 42500 \\ \times 9 \\ \hline 382500 \end{array}$$

move decimal
2 spots in

Scott earned \$3,825 in commissions

Ex 4 Finding the Rate of Commission

Chris Kudson earned a commission of \$510 for selling \$17,000 worth of shipping supplies. Find the commission rate.

$$\frac{\text{amount of commission}}{\text{amount of sales}} = \text{rate of commission}$$

$$\frac{510}{17000} = X \cdot \frac{17000}{17000}$$

$$X = 0.03$$

ANS: 3%

$$\begin{array}{r} 1700 \overline{) 51.00} \\ \underline{-5100} \\ 0 \end{array}$$

2 1700
3 5100