

Warm Up

Shelly has a total of \$32.18 worth of toys to buy. The sales tax in the state of RI is 7%.

What is her total amount owed at the register?

$$\begin{array}{r} 32.18 \\ \times 0.07 \\ \hline 2.2526 \end{array}$$

$$\begin{array}{r} 32.18 \\ + 2.25 \\ \hline \$34.43 \end{array}$$

6.5 Using the Percent Equation

$$= \text{is} / \frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

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



** must convert % number to a decimal

$$\frac{7}{100} = 0.07$$

Ex 1 Finding the Part

a) Find 15% of \$160
 $x = 0.15 \cdot 160$

$$\begin{array}{r} 160 \\ \times 15 \\ \hline 800 \\ 1600 \\ \hline 2400 \end{array}$$

$$x = \$24$$

b) Find 110% of 80 cases

$$x = 1.1 \cdot 80$$

$$x = 88 \text{ cases}$$

c) Find 0.4% of 250 patients

Ex 2 Solving for the Whole

a) 13 chairs is 6% of what number?

$$\frac{13}{0.06} = \frac{0.06 \cdot x}{0.06}$$

$$x = 217 \text{ chairs}$$

$$0.06 \overline{) 1300.0} \\ \underline{-1200} \\ 100 \\ \underline{-60} \\ 400 \\ \underline{-360} \\ 400 \\ \underline{-360} \\ 400 \\ \underline{-360} \\ 400$$

b) 119 students is 15% of what number of students?

c) $8 \frac{1}{2}\%$ of what number is 102?
 8.5%

$$0.085 \overline{) 102.000}$$

$$\frac{0.085 \cdot x}{0.085} = \frac{102}{0.085} \quad x = 1200$$

Ex 3 Finding the Percent

a) 13 mechanics is what percent of 52 mechanics?

$$\frac{13}{52} = x \cdot \frac{52}{52}$$

$$x = 0.25 \rightarrow \boxed{25\%}$$

$$52 \overline{) 13.00} \begin{array}{r} .25 \\ - 104 \downarrow \\ \hline 260 \\ - 260 \\ \hline 0 \end{array}$$

$$\frac{13}{52} = \frac{1}{4} = \frac{25}{100}$$

b) What percent of \$500 is \$100?

c) 6 ladders is what percent of 1200 ladders?

d) What percent of \$300 is \$390?

$$x \cdot \frac{300}{300} = \frac{390}{300} \div 3 \quad \frac{130}{100}$$

$$x = 130\%$$

CAUTION!!!

You Try! Find the missing piece *part = percent · whole*

(a) 15% of 880 policyholders

132 policy holders

(b) 34 post office boxes is
what percent of
85 post office boxes?

40 %

(c) 666 inoculations is 45%
of what number of
inoculations?

1480 inoculations