

## Chapter 2

### Lesson 7: Percent of a Number

Find a percent of a number:

#### METHOD 1:

- Write the percent as a fraction with denominator of 100
- Multiply the fraction by the number
- Reduce (Cake method)

Examples:

32% of 60

$$\frac{32}{100} \cdot \frac{60}{1} = \frac{1920}{100}$$

19.2

$$\begin{array}{r} 5 \overline{) 1920} \quad 100 \\ 2 \overline{) 384} \quad 20 \\ 2 \overline{) 192} \quad 10 \\ \underline{96} \quad 5 \end{array}$$

$$\begin{array}{r} 19.2 \\ 5 \overline{) 96.0} \\ \underline{-50} \downarrow \\ 46 \\ \underline{-45} \downarrow \\ 10 \end{array}$$

#### METHOD 2:

- Write the percent as a decimal
- Multiply decimal by number

Examples:

32% of 60

$$32 = 0.32$$

$$0.32 \times 60$$

$$\begin{array}{r} 0.32 \\ \times 60 \\ \hline 19.20 \end{array}$$

19.2

7% of 46

$$.07$$

$$0.07 \times 46$$

$$\begin{array}{r} 0.07 \\ \times 46 \\ \hline 042 \\ 0280 \\ \hline 322 \\ \hline (3.22) \end{array}$$

### Method 3: ZORRO

- Write percent as a fraction
- Reduce (Cake Method)
- Set up your "Z"
  - Starting at the bottom, draw a line from the denominator to the whole number (Divide)
  - Draw a line from the whole number to the numerator (Multiply first answer with numerator)
  - Draw top line to form Z and write answer

Examples:

32% of 60

$$\frac{32}{100} \quad 2 \overline{) 32 \ 100}$$

$$\quad \quad 2 \overline{) 16 \ 50}$$

$$\quad \quad \quad 8 \ 25$$

$$\frac{32}{100} \quad \text{---} \quad 19.2$$

$$\quad \quad \quad \text{---} \quad 60$$

$$\frac{60}{100} = 0.6$$

$$\begin{array}{r} \times 32 \\ 0.6 \\ \hline 19.2 \\ + 00.0 \\ \hline 19.2 \end{array}$$

19.2

35% of 96

$$\frac{35}{100} \quad 5 \overline{) 35 \ 100}$$

$$\quad \quad 5 \overline{) 70 \ 20}$$

$$\quad \quad \quad 2 \overline{) 14 \ 4}$$

$$\quad \quad \quad \quad 7 \ 2$$

$$\frac{35}{100} \quad \text{---} \quad 33.6$$

$$\quad \quad \quad \text{---} \quad 96$$

$$\frac{96}{2} = 48 \quad \begin{array}{r} \times 5 \\ 48 \\ \hline 336 \end{array}$$