

## Percent of a Number

100% of a number **is the number itself.**

### Example - Using Mental Math to Determine Percent of a Number

You can use **mental math** such as **doubling**, **halving**, and dividing by **10** to estimate the percents of numbers.

1) 250% of 12

$$\begin{aligned} &\text{If } 100\% \text{ of } 12 = 12 \text{ then} \\ &\text{doubled } \rightarrow 200\% \text{ of } 12 = 24 \text{ and} \\ &\text{halved } \rightarrow 50\% \text{ of } 12 = 6 \\ &\text{So } 250\% \text{ of } 12 = 30 \end{aligned}$$

250% of 12 = 30

2) 3% of \$450

$$\begin{aligned} &\text{If } 100\% \text{ of } \$450 = \$450 \text{ then} \\ &\div 100 \rightarrow 1\% \text{ of } \$450 = \$4.50 \\ &\text{So } \times 3 \rightarrow 3\% \text{ of } \$450 = \$13.50 \end{aligned}$$

3% of \$450 = \$13.50

### Example - Using a Calculator to Determine Percent of a Number

To calculate the percent of a number using a calculator:

- Convert the percent to a decimal ( $\% \div 100$ )
- Multiply by the number you need the percent of ( $\times \#$ )

1) 250% of 12

$$\begin{aligned} 250 \div 100 &= 2.5 \\ 2.5 \times 12 &= 30 \end{aligned}$$

ⓐ Another option is to use the **%** button:

$12 \times 250\% = 30$

ⓑ If you can't find your **%** button, email me a pic of your calculator and I'll help you locate it.

Outcome:

N3 - Demonstrate an understanding of percents greater than or equal to 0%

2) 3% of \$450

$$3 \div 100 = 0.03$$

$$0.03 \times \$450 = \$13.50$$

OR

$$\$450 \times 3\% = \$13.50$$

3) 0.5% of 350

$$0.5 \div 100 = 0.005$$

$$0.005 \times 350 = 1.75$$

OR

$$350 \times 0.5\% = 1.75$$

Careful! Common error is to think 0.5% means 0.5.

that would be 50% !!!



Practice the following:

Required - Page 142 # 3 - 8

Optional (challenge yourself!!!) - Page 143 #13, 14, 15

Outcome:

N3 - Demonstrate an understanding of percents greater than or equal to 0%