Basic Operations with Percents

- **How to Convert a Percent to a Decimal**

To convert a percent to a decimal, move the decimal point two places to the left and drop the percent sign.

**Example:** 73.5% = 0.735

**Example:** 16.45% = 0.1645

**Example:** 37% = 0.37

**Example:** 200% = 2

We use this kind of conversion to determine a percent of a number. We do this by changing the percent to a decimal and then we multiply the decimal by the number.

**Example:** Find 50% of 80.

50% = 0.50 and then we **multiply** (0.50)(80) = 40

**Example:** Find 47.5% of 50.

47.5% = 0.475 and then we **multiply** (0.475)(50) = 23.75

**Example:** Find 6.2% of $19.95.

6.2% = 0.062 and then we **multiply** (0.062)(19.95) = 1.2369

$1.24 (rounded to the nearest penny)
How to Convert a Decimal to a Percent

To convert a decimal to a percent, move the decimal point two places to the right and attach a percent sign.

Example: 0.62 = 62%

Example: 0.34162 = 34.162%

Example: 1.6 = 160%

Example: 0.1 = 10%

Example: 0.01 = 1%

Example: 0.005 = .5% or ½ %

We use this kind of conversion to determine what percent one number is of another number. We do this by dividing the “is number” by the “of number”, \( \frac{\text{is}}{\text{of}} \), and then we convert the resulting decimal to a percent.

Example: What percent of 90 is 45?

\[
\frac{\text{is}}{\text{of}} = \frac{45}{90} = 0.50
\]

0.50 = 50%

Example: What percent is 62 of 80?

\[
\frac{\text{is}}{\text{of}} = \frac{62}{80} = 0.775
\]

0.775 = 77.5%

Example: Shoe sales at the Grand Master Flash Shoe Store yesterday were:

27 Basketball
33 Tennis
16 Hiking
19 Cross-trainers
95 Total sales

What percent of the total are the basketball shoe sales?

\[
\frac{\text{is}}{\text{of}} = \frac{27}{95} = 0.284210526 = 28.4210526\% \approx 28.4\%
\]