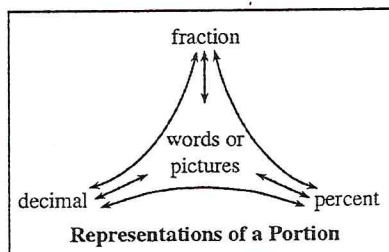# Fraction ⇔ Decimal ⇔ Percent

The **Representations of a Portion web** diagram below illustrates that fractions, decimals, and percents are different ways to represent a portion of a number. Portions can also be represented in words, such as "four fifths" or "twelve fifteenths" or with diagrams.

The examples below show how to convert from one form to another.

Representations of a Portion

Decimal to percent:
Multiply the decimal by 100.

$$(0.34)(100) = 34\%$$

Fraction to percent:
Set up an equivalent fraction using 100 as the denominator. The numerator is the percent.

$$\frac{4}{5} \cdot \frac{20}{20} = \frac{80}{100} = 80\%$$

Decimal to fraction:
Use the digits as the numerator. Use the decimal place value as the denominator. Simplify as needed.

$$0.2 = \frac{2}{10} = \frac{1}{5}$$

Percent to decimal:
Divide the percent by 100.

$$78.6\% = 78.6 \div 100 = 0.786$$

Percent to fraction:
Use 100 as the denominator. Use the number in the percent as the numerator. Simplify as needed.

$$22\% = \frac{22}{100} \cdot \frac{1/2}{1/2} = \frac{11}{50}$$

Fraction to decimal:
Divide the numerator by the denominator.

$$\frac{3}{8} = 3 \div 8 = 0.375$$