



**Math Lesson 3**  
**Fractions, Decimals II (Grades 4-6)**

**Instruction 3-5**  
**Calculate Percentages and Solve Problems**

**What is a percentage?**

A percentage of anything tells us how many parts in each hundred there are of the item we are referring to.

You can convert a percentage to a decimal by dividing the percentage by 100. So, 80% is equal to 0.80.

You can convert a decimal to a percentage by doing the opposite of converting a percentage into a decimal. So, to convert a decimal to a percentage, you multiply by 100 instead of dividing by 100.

To change a percentage to a fraction by placing the percentage over 100:

$$68\% = \frac{68}{100} = \frac{17}{25}$$

Don't forget to reduce!

To change a decimal to a fraction, read the decimal in words and substitute numerals for words.

$$0.98 \text{ reads ninety eight hundredths} = \frac{98}{100}$$

This can be reduced:

$$\frac{98}{100} \div \frac{2}{2} = \frac{49}{50}$$

$$0.365 \text{ reads three hundred sixty five thousandths} = \frac{365}{1000}$$

This can be reduced:

$$\frac{365}{1000} \div \frac{5}{5} = \frac{73}{200}$$

Digits to the left of the decimal remain as whole numbers. For example:

$$2.75 = 2 \frac{75}{100} = 2 \frac{3}{4}$$



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To convert fractions to decimals, you divide the numerator by the denominator.

Since  $\frac{3}{15}$  means  $3 \div 15$ , you can carry out the division process and the result is a decimal:

$$\begin{array}{r} 0.2 \\ 15 \overline{)3.0} \end{array}$$