▶ Decimals

A decimal is a special kind of fraction. You use decimals every day when you deal with money—$10.35 is a decimal that represents 10 dollars and 35 cents. The decimal point separates the dollars from the cents. Because there are 100 cents in one dollar, 1¢ is $\frac{1}{100}$ of a dollar, or $.01.

Each decimal digit to the right of the decimal point has a name:

Examples: .1 = 1 tenth = $\frac{1}{10}$
.02 = 2 hundredths = $\frac{2}{100}$
.003 = 3 thousandths = $\frac{3}{1{,}000}$
.0004 = 4 ten-thousandths = $\frac{4}{10{,}000}$

When you add zeros after the right-most decimal place, you don't change the value of the decimal. For example, 6.17 is the same as all of these:

6.170
6.1700
6.17000000000000000

If there are digits on both sides of the decimal point (like 10.35), the number is called a **mixed decimal**. If there are digits only to the right of the decimal point (like .53), the number is called a **decimal**. A whole number (like 15) is understood to have a decimal point at its right (15.). Thus, 15 is the same as 15.0, 15.00, 15.000, and so on.