

Fractions: Bits and Pieces

Fractions are used often, for instance when adding leftover pails of foam or mixing gas and oil for chain saw fuel. Fractions allow the use of parts of a number or combinations of parts and whole numbers, such as $\frac{1}{2}$

, or $\frac{1}{2}$. The remainder found in long division can be changed to a fraction. Like whole numbers, fractions can be added, subtracted, divided, and multiplied. Fractions can also be represented as decimals (see Section 1.6).

A fraction consists of a numerator (top number) and a denominator (bottom number).

The numerator represents the number of parts available.

The denominator represents the number of parts in a whole.

Example 1 - What fraction of the box in the figure below is shaded? What fraction is not shaded?



The box is divided into five parts. Two of those five parts are shaded. The shaded fraction represents $\frac{2}{5}$. ***In this case, of the figure is shaded.***

Three of the five parts are not shaded. The unshaded fraction represents $\frac{3}{5}$. ***In this case, of the figure is not shaded.***

Whole Numbers as Fractions

Fractions can also describe whole numbers or a whole number with a remainder expressed as a fraction. For example, a whole number can be written as:

$$\frac{4}{4} = 1$$

$$\frac{8}{4} = 2$$

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, or $\frac{32}{16} = 2$

The whole number 1 can be written as:

$\frac{1}{1} = 1$
 $\frac{2}{2} = 1$
 $\frac{3}{3} = 1$
 $\frac{4}{4} = 1$
, etc.

Fractions larger than 1 have a larger number in the numerator or top part of the fraction.

$\frac{5}{4}$, $\frac{3}{2}$, and $\frac{7}{3}$ are all larger than 1.