Simple fraction

Fractions are created as follows.

$$\frac{1}{x} = x^{-1}$$

Continued (or cascade) fractions

A fraction can contain another one. If the command $\frac$ is, this would be the result:

$$\frac{x}{x + \frac{1}{2}}$$

The sub fraction is very small. This is why the command $\cfrac$ is recommended for continued fractions:

$$\cfrac{x}{x + \cfrac{1}{2}}$$

Some people prefer to still use $\frac$ and use the command $\displaystyle$ before each sub fractions:

$$\frac{x}{x + \frac{1}{2}}$$

Despite this practice is sometimes promoted, it should be avoided because the equation has some spacing issues, such as on top of $\frac{1}{2}$.