Simplifying Improper Fractions

An improper fraction is one in which the numerator is larger than the denominator. If the answer to an addition, subtraction, multiplication, or division fraction is improper, simplify it and reduce if possible.

Ex. 1: $\dfrac{4}{3}$ is an improper fraction. Divide the denominator into numerator.

$$3\overline{)4} \quad \begin{array}{r} 1 \\ \hline 4 \\ -3 \\ \hline 1 \end{array} = 1\dfrac{1}{3}$$

Ex. 2: $\dfrac{10}{8}$ is an improper fraction. Divide to simplify. Reduce.

$$\dfrac{10}{8} = 8\overline{)\begin{array}{r} 1 \\ 10 \\ -8 \\ \hline 2 \end{array}} = 1\dfrac{2}{8} = 1\dfrac{1}{4}$$

Ex. 3: $\dfrac{136}{20}$ is an improper fraction. Divide to simplify. Reduce.

$$\dfrac{136}{20} = 20\overline{)\begin{array}{r} 6 \\ 136 \\ -120 \\ \hline 16 \end{array}} = 6\dfrac{16}{20} = 6\dfrac{4}{5}$$