

Notes: Greatest Common Factor and Simplifying Fractions

The greatest common factor, or GCF, is the largest factor of all the numbers in the set. You can also look at it as the largest number that divided evenly into all of the numbers. Being able to find the GCF allows you to simplify fractions.

To simplify a fraction, you must find the GCF of the numerator and denominator, divide both numbers by the GCF, and write down the result of each division problem.

Examples: Simplify each fraction.

$$\frac{9}{15} = \frac{\cancel{3} \cdot 3}{\cancel{3} \cdot 5} = \boxed{\frac{3}{5}}$$

$$\frac{20}{25} = \frac{\cancel{5} \cdot 4}{\cancel{5} \cdot 5} = \boxed{\frac{4}{5}}$$

$$\frac{14}{21} = \frac{\cancel{7} \cdot 2}{\cancel{7} \cdot 3} = \boxed{\frac{2}{3}}$$

$$\frac{81}{72} = \frac{\cancel{9} \cdot 9}{\cancel{9} \cdot 8} = \boxed{\frac{9}{8}}$$

$$\frac{16}{9} = \text{already simplified}$$

$$\frac{75}{30} = \frac{\cancel{15} \cdot 5}{\cancel{15} \cdot 2} = \boxed{\frac{5}{2}}$$

$$\frac{108}{40} = \frac{4 \cdot \cancel{27}}{4 \cdot \cancel{10}} = \boxed{\frac{27}{10}}$$

$$\frac{400}{600} = \frac{\cancel{4} \cdot 100}{\cancel{6} \cdot 100} = \boxed{\frac{2}{3}}$$

Calc

$$\frac{1825}{2875} = \boxed{\frac{73}{115}}$$

$$\frac{216}{228} = \boxed{\frac{18}{19}}$$

$$\frac{1380}{1740} = \boxed{\frac{23}{29}}$$

$$\frac{8649}{651} = \boxed{\frac{93}{7}}$$