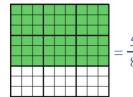
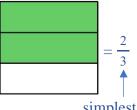
Check Your Answers on Simplifying Fractions!

1.
$$\frac{2}{3} \left(\frac{54}{81} = \frac{6}{9} = \frac{2}{3} \right)$$

A fraction compares $\frac{part}{whole}$:





$$2 \cdot 2^2 \cdot 3^2 \cdot 5 \quad (180 = 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5)$$

2. $2^2 \cdot 3^2 \cdot 5$ (180 = $2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$) Numbers that are prime have only two factors: 1 and itself.

simplest form

The greatest common factor (GCF) is the largest number that can be divided into the given numbers (the largest factor common to 12, 36, 54).

4.
$$\frac{2}{5}$$
 $\left(\frac{60}{150} \div \frac{30}{30} = \frac{2}{5}\right)$

If 60 tiles have been damaged by the chemical spill, then 60 tiles must be replaced out of the total of 150 square tiles in the science lab.

5.
$$\frac{1}{4}$$
 $\left(\frac{20}{80} \div \frac{20}{20} = \frac{1}{4}\right)$

To simplify fractions, look for a common factor (preferably the GCF – greatest common factor) between the numerator and the denominator. The GCF is the largest number that can be divided into both numbers. Divide both the numerator and denominator by that common factor.

6.
$$\frac{3}{7}$$
 $\left(\frac{18}{42} \div \frac{2}{2} = \frac{9}{21} \div \frac{3}{3} = \frac{3}{7}\right)$

It is possible to divide by any common factor, continuing to simplify after each division, rather than searching for the greatest common factor.

7.
$$\frac{3}{4} \left(\frac{63}{84} \div \frac{3}{3} = \frac{21}{28} \div \frac{7}{7} = \frac{3}{4} \right)$$

It is sometimes challenging to find a common factor!

8.
$$\frac{5}{12} \left(\frac{60}{144} \div \frac{2}{2} = \frac{30}{72} \div \frac{2}{2} = \frac{15}{36} \div \frac{3}{3} = \frac{5}{12} \right)$$

The fraction is completely simplified when there are no common factors between the numerator and denominator.

9.
$$\frac{6}{21} = \frac{12}{42} = \frac{16}{56} = \frac{24}{84} = \frac{2}{7}$$
 and $\frac{12}{32} = \frac{27}{72} = \frac{3}{8}$

This was tricky! Did you get all of those?

10.
$$\frac{12}{60} = \frac{1}{5}$$
, $\frac{8}{20} = \frac{2}{5}$, $\frac{27}{45} = \frac{3}{5}$, $\frac{24}{30} = \frac{4}{5}$

Much easier to order after simplifying!!

Perfect score? Yes! You've got this!! You're ready to move on to the next section!!!