Fractions

A fraction consist of two parts, the number above the dash is called the numerator and the part under the dash is called the denominator

$$\underset{Numerator}{4} \;/\; \underset{Denominator}{7} \rightarrow Dash$$

When the numerator and denominator of a fraction have no common factors other than 1, the fraction is in simplest form.

When the numerator and denominator of a fraction have a common factor we use a GCF to write a fraction in simplest form.

What is the simplest form of $\frac{36}{48}$

STEP 1: Find the GCF of 36 and 48

$36 = 2 \times 2 \times 3 \times 3$

$48 = 2 \times 2 \times 2 \times 2 \times 3$

$GCF(36, 48) = 12$

STEP 2: Divide the numerator and denominator by the GCF.

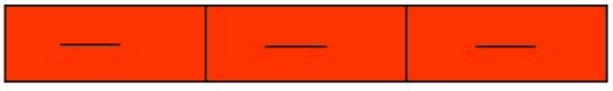
So, $\frac{36}{48} = \frac{36 \div 12}{48 \div 12} = \frac{3}{4}$

You can use fraction bars to find the simplest form of a fraction.

Find the simplest form for $\frac{3}{12}$

STEP 1

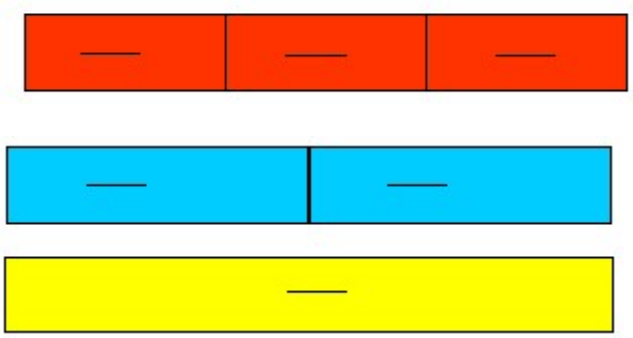
Model $\frac{3}{12}$ with fraction bars.



$\frac{3}{12}$

STEP 2

Line up other fraction bars $\frac{3}{12}$ to find all the equivalent fractions for $\frac{3}{12}$ You can see $\frac{2}{8}$ $\frac{2}{8}$ and $\frac{1}{4}$ are equivalent fractions to $\frac{3}{12}$.



STEP 3

The equivalent fraction that has the largest fraction bar possible is in simplest form.

So, $\frac{1}{4}$ is simplest form of $\frac{3}{12}$.

Examples:

A - Write an equivalent fraction.

1) $\frac{1}{4} = \frac{2}{8}$

2) $\frac{5}{6} = \frac{15}{18}$

3) $\frac{2}{10} = \frac{1}{5}$

4) $\frac{3}{9} = \frac{1}{3}$

5) $\frac{7}{5} = \frac{28}{20}$

B- Write each fraction in simplest form.

6) $\frac{14}{35} = \frac{2}{5}$

7) $\frac{25}{40} = \frac{5}{8}$

8) $\frac{36}{48} = \frac{6}{8} = \frac{3}{4}$

9) $\frac{27}{81} = \frac{3}{9} = \frac{1}{3}$