

ORDERING FRACTIONS

A fraction consists of two numbers separated by a line.

The top number (or numerator) tells how many fractional pieces there are. In the fraction $\frac{3}{8}$, we have three pieces.

The denominator of a fraction tells how many pieces a whole object was divided into. The fraction $\frac{3}{8}$ tells us that the whole object was divided into 8 pieces.

How to compare and order fractions:

If the **denominators of two fractions are the same**, the fraction with the largest numerator is the larger fraction.

For example,

$\frac{5}{8}$ is larger than $\frac{3}{8}$ because five pieces are more than three pieces.

If two fractions have the same denominator, it is difficult to determine which is larger if both fractions have the same denominator.

Multiply the numerator and denominator of one fraction by the same number so both fractions will have the same denominator. For example, if $\frac{5}{12}$ and $\frac{1}{3}$ are being compared, $\frac{1}{3}$ should be multiplied by $\frac{4}{4}$. It does not change the value of $\frac{1}{3}$ to be multiplied by $\frac{4}{4}$ (which is equal to 1) because any number multiplied by 1 is still the same number. After the multiplication ($\frac{1}{3} * \frac{4}{4} = \frac{4}{12}$), the comparison can be made between $\frac{5}{12}$ and $\frac{4}{12}$.

You may have to multiply both fractions by different numbers to produce the same denominator for both fractions. For example if $\frac{2}{3}$ and $\frac{3}{4}$ are compared, we need to multiply $\frac{2}{3}$ by $\frac{4}{4}$ to give $\frac{8}{12}$ and multiply $\frac{3}{4}$ by $\frac{3}{3}$ to give $\frac{9}{12}$. The fraction $\frac{3}{4}$ which is equal to $\frac{9}{12}$ is larger than $\frac{2}{3}$, which is equal to $\frac{8}{12}$.

The fraction with the larger numerator is the larger fraction if the denominators are the same.



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Compare and Order the following fractions:

$$\frac{1}{4}, \frac{3}{4}, \frac{4}{4}, \frac{2}{4} = \underline{\hspace{10em}}$$

$$\frac{7}{9}, \frac{3}{9}, \frac{1}{9}, \frac{5}{9} = \underline{\hspace{10em}}$$

$$\frac{1}{2}, \frac{2}{3}, \frac{1}{4}, \frac{4}{5} = \underline{\hspace{10em}}$$

$$\frac{3}{4}, \frac{7}{8}, \frac{2}{5}, \underline{\hspace{10em}}$$



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