

NOTES

Ordering Fractions

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VOCABULARY:

denominator: The value written below the line within a fraction, indicating the number of equal parts into which one whole is divided. For example, in the fraction $\frac{3}{4}$, the denominator is 4.

numerator: The top part of a fraction. For $\frac{5}{8}$, the numerator is 5.

Sometimes we need to compare two fractions to discover which is larger or smaller.

There are two main ways to compare fractions: using **decimals**, or using the **same denominator**.

The Same Denominator Method

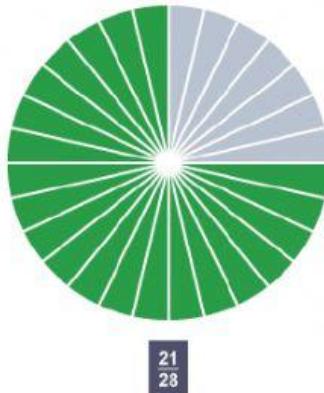
Which fraction is bigger: $\frac{3}{4}$ or $\frac{5}{7}$?

It is hard to answer this question just by looking at the fractions. However, if you write the fractions with the same bottom number, or denominator, the question will be easy.

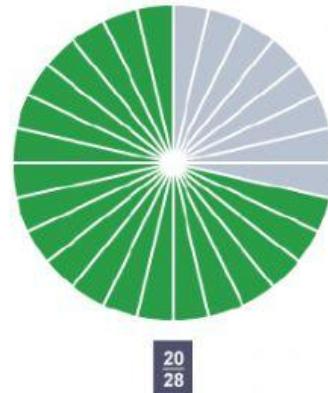
$\frac{3}{4}$ has a denominator of 4, and $\frac{5}{7}$ has a denominator of 7.

4 and 7 both divide into 28, so rewrite the fractions with a denominator of 28.

$$\frac{3}{4} = \frac{21}{28}$$



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



NOTES

It is easy to see that $\frac{21}{28}$ is bigger than $\frac{20}{28}$

Therefore $\frac{3}{4}$ is bigger than $\frac{5}{7}$

The Decimal Method of Comparing Fractions

Convert each fraction to decimals, and then compare the decimals.

Which is bigger?

$\frac{3}{8}$ or $\frac{5}{12}$

$$\frac{3}{8} = 0.375$$

0.378

$$\begin{array}{r} 3.000 \\ - 24 \\ \hline 60 \\ - 56 \\ \hline 040 \\ - 40 \\ \hline \end{array}$$

12

0.378

0.375

$$\frac{5}{12} = 0.416\overline{6}$$

0.416

$$\begin{array}{r} 5.000 \\ - 48 \\ \hline 020 \\ - 12 \\ \hline 80 \\ - 72 \\ \hline 8 \end{array}$$

So $\frac{5}{12}$ is bigger.

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