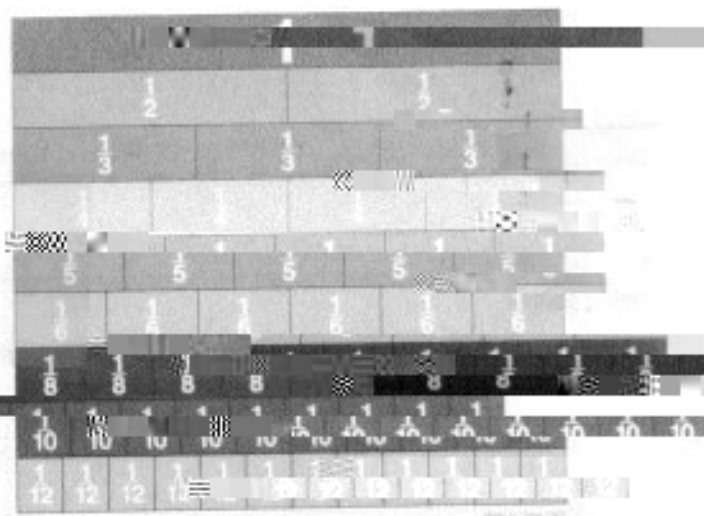


Three ways to compare fractions with different denominators:

by using fraction bars,

by using benchmark fractions ($< \frac{1}{2}$, $> \frac{1}{2}$, > 1),

by finding a common denominator.



Using benchmark fractions to compare:

$$\frac{1}{2} = \frac{1}{2}$$

$$\frac{1}{3} < \frac{1}{2}$$

$$\frac{2}{3} > \frac{1}{2}$$

$$\frac{1}{4} < \frac{1}{2}$$

$$\frac{3}{4} > \frac{1}{2}$$

$$\frac{1}{5} < \frac{1}{2}$$

$$\frac{2}{5} < \frac{1}{2}$$

$$\frac{3}{5} > \frac{1}{2}$$

$$\frac{4}{5} > \frac{1}{2}$$

$$\frac{3}{6} = \frac{1}{2}$$

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

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

$$\frac{6}{12} = \frac{1}{2}$$

numerator

If numerator > denominator, fraction is greater than 1

denominator

ominator

Example:

$$\frac{5}{3} > 1$$

Finding a common denominator (multiply by same number to get same denominator) and compare.

Example: Comparing $\frac{2}{3}$ and $\frac{7}{12}$

$$\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}, \quad \frac{7}{12} < \frac{8}{12}, \quad \text{so } \frac{2}{3} > \frac{7}{12}$$

5 strategies to compare two fractions.

1. Check if one fraction is greater than 1 and if the other fraction is less than 1.

$$\frac{4}{3} \bigcirc \frac{2}{5}$$

$$\frac{4}{3} > 1 \text{ and } \frac{2}{5} < 1, \text{ so } \frac{4}{3} > \frac{2}{5}$$

2. Check if one fraction is greater than 1 and the other fraction is less than 1.

$$\frac{5}{6} \bigcirc \frac{4}{5}$$

$$\frac{5}{6} = \frac{5}{6} > 1, \frac{4}{5} = \frac{4}{5} < 1, \text{ so } \frac{5}{6} > \frac{4}{5}$$

3. If two fractions have the same denominator, compare the numerators.

$$\frac{7}{12} \bigcirc \frac{5}{12}$$

$$7 > 5, \text{ so } \frac{7}{12} > \frac{5}{12}$$

4. If two fractions have the same numerator, compare the denominators.

$$\frac{5}{6} \bigcirc \frac{5}{10}$$

$$\text{Sixths are larger than tenths, so } \frac{5}{6} > \frac{5}{10}$$

5. Use equivalent fractions to rewrite the fractions so they have the same denominator.

$$\frac{3}{4} \bigcirc \frac{2}{5}$$

$$\frac{3}{4} = \frac{9}{12}, \frac{2}{5} = \frac{4}{10}, \text{ so } \frac{9}{12} > \frac{4}{10}$$