Compare Rationals

6th Grade Mathematics
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The **least common denominator** (LCD) is the least common multiple of the denominators.

Example 1: **Compare. Write <, >, or =.**

$$\frac{5}{6} \boxed{>} \frac{7}{10}$$

Multiply to find a common denominator.

$6 \bullet 10 = 60$

$$\frac{5}{6} \bullet \frac{10}{10} = \frac{5 \bullet 10}{6 \bullet 10} = \frac{50}{60}$$

$$\frac{7}{10} \bullet \frac{6}{6} = \frac{7 \bullet 6}{10 \bullet 6} = \frac{42}{60}$$

$$\frac{50}{60} > \frac{42}{60}, \text{ so } \frac{5}{6} > \frac{7}{10}$$

Multiply 6 and 10 to find a common denominator.

Write the fractions with a common denominator.

Compare the fractions.

Example 2

Compare. Write <, >, or =.

$$\frac{2}{3} \boxed{<} \frac{4}{5}$$

Find the least common denominator.

$$\frac{2}{3} \cdot \frac{5}{5} = \frac{2 \cdot 5}{3 \cdot 5} = \frac{10}{15}$$

$$\frac{4}{5} \cdot \frac{3}{3} = \frac{4 \cdot 3}{5 \cdot 3} = \frac{12}{15}$$

Write the fractions with a common denominator.

$$\frac{10}{15} < \frac{12}{15}, \text{ so } \frac{2}{3} < \frac{4}{5}$$

Compare the fractions.