Lesson

Converting fractions into fractions with a common denominator is useful for comparing fractions, adding fractions, and subtracting fractions.

First, find the lowest common denominator (LCD). Then, convert each fraction into an equivalent fraction using the LCD.

Example: List the following fractions from least to greatest:

$$\frac{2}{5} \qquad \frac{1}{2} \qquad \frac{3}{8}$$

Solution: ① find the LCD:

8: 8, 16, 24, 32, (40)

② Convert the fractions:

$$\frac{2}{5} \xrightarrow{\times 8} \frac{16}{40} \quad (2) \qquad \frac{1}{2} \xrightarrow{\times 20} \frac{20}{40} \quad (3) \qquad \frac{3}{8} \xrightarrow{\times 5} \frac{15}{40} \quad (1)$$

③ Find the order, and express it in the original terms.

$$\boxed{\frac{3}{8} < \frac{2}{5} < \frac{1}{2}}$$

Example 2: List all the numerators that make the expression true:

$$\frac{1}{3} < \frac{\square}{12} < \frac{5}{6}$$