

# Ordering Fractions and Decimals

You can order fractions by finding the least common denominator (LCD) to write equivalent fractions. The least common denominator is the least common multiple (LCM) of the denominators. When the denominators are the same, the greater fraction has the greater numerator.

## EXAMPLE A

Write the fractions in order from greatest to least.

$$\frac{1}{2}, \frac{3}{4}, \frac{5}{8}$$

**Step 1:** Find the LCD of  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and  $\frac{5}{8}$ .

Because 8 is a multiple of 2 and 4, the LCD is 8.

**Step 2:** Find equivalent fractions for  $\frac{1}{2}$  and  $\frac{3}{4}$  using 8 as the denominator.

$$\frac{1}{2} \times \frac{4}{4} = \frac{4}{8}; \quad \frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$$

**Step 3:** Order the fractions.

$$\frac{6}{8} > \frac{5}{8} > \frac{4}{8}$$

**Solution:** Because  $\frac{6}{8} = \frac{3}{4}$  and  $\frac{1}{2} = \frac{4}{8}$ , from greatest to least the order is  $\frac{3}{4}$ ,  $\frac{5}{8}$ , and  $\frac{1}{2}$ .

To order decimals align the decimal points. Then compare the digits from left to right, just like you would compare whole numbers.

## EXAMPLE B

Write these decimals in order from least to greatest.

12.7, 12.58, 12.79

**Step 1:** Write the decimals aligned on the decimal points. Place a zero after 12.7, so each decimal has the same number of places.

12.70  
12.58  
12.79

**Step 2:** Start at the left. The tens digits are all the same. The ones digits are all the same. The tenths digits are not the same. The least digit is 5, so 12.58 is the least number.

12.70  
12.58 ← least  
12.79

**Step 3:** Look at the hundredths place. Because  $0 < 9$ ,  $12.70 < 12.79$ .

12.70  
12.58 ← least  
12.79 ← greatest

**Solution:** The decimals from least to greatest are: 12.58, 12.7, and 12.79.

## Ordering Fractions and Decimals (continued)

### PRACTICE

Order from least to greatest.

1. 0.62, 0.5, 0.57

2.  $\frac{3}{8}, \frac{4}{5}, \frac{2}{3}$

3.  $\frac{2}{5}, \frac{1}{4}, \frac{3}{6}$

4.  $\frac{1}{3}, \frac{1}{2}, \frac{1}{8}$

5. 8.7, 7.92, 8.8

6. 3.16, 3.14, 6.14