

# Center Activity Answer Key

## Activity 4.29

### Use Fraction Vocabulary

#### ★ Check Understanding

Sample answer: Write a fraction equivalent to  $\frac{3}{5}$  with a denominator of 10:  $\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$ . Compare the numerators. The fraction  $\frac{7}{10}$  is greater than  $\frac{6}{10}$ . So,  $\frac{7}{10}$  is greater than  $\frac{3}{5}$ .

#### Recording Sheet

1. Find a fraction **equivalent** to  $\frac{6}{10}$  with a **denominator** of 100:  $\frac{6}{10} \times \frac{10}{10} = \frac{60}{100}$ . The fraction  $\frac{60}{100}$  is **greater than**  $\frac{2}{100}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

2. Find a fraction **equivalent** to  $\frac{2}{100}$  with a **numerator** of 6:  $\frac{2}{100} \times \frac{3}{3} = \frac{6}{300}$ . The denominator in  $\frac{6}{10}$  is **less than** the denominator in  $\frac{6}{300}$  which means  $\frac{6}{10}$  has larger parts. The fraction  $\frac{6}{10}$  is **greater than**  $\frac{6}{300}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

#### ★★ Check Understanding

Sample answer: Write a fraction equivalent to  $\frac{3}{5}$  with a denominator of 10:  $\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$ . Compare the numerators. The fraction  $\frac{7}{10}$  is greater than  $\frac{6}{10}$ . So,  $\frac{7}{10}$  is greater than  $\frac{3}{5}$ .

#### Recording Sheet

1. Find a fraction **equivalent** to  $\frac{6}{10}$  with a **denominator** of 100:  $\frac{6}{10} \times \frac{10}{10} = \frac{60}{100}$ . The fraction  $\frac{60}{100}$  is **greater than**  $\frac{2}{100}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

2. Find a fraction **equivalent** to  $\frac{2}{100}$  with a **numerator** of 6:  $\frac{2}{100} \times \frac{3}{3} = \frac{6}{300}$ . The denominator in  $\frac{6}{10}$  is **less than** the denominator in  $\frac{6}{300}$ , which means that  $\frac{6}{10}$  has larger parts. The fraction  $\frac{6}{10}$  is **greater than**  $\frac{6}{300}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

3. Compare  $\frac{6}{10}$  and  $\frac{2}{100}$  to the **benchmark** fraction  $\frac{1}{2}$ . The fraction  $\frac{6}{10}$  is **greater than**  $\frac{1}{2}$ , and  $\frac{2}{100}$  is **less than**  $\frac{1}{2}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

# Center Activity Answer Key

## Activity 4.29 (continued)

### Use Fraction Vocabulary

#### ★★★ Check Understanding

Sample answer: Write a fraction equivalent to  $\frac{3}{5}$  with a denominator of 10:  $\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$ . Compare the numerators. The fraction  $\frac{7}{10}$  is greater than  $\frac{6}{10}$ . So,  $\frac{7}{10}$  is greater than  $\frac{3}{5}$ .

#### Recording Sheet

1. Find a fraction **equivalent** to  $\frac{6}{10}$  with a **denominator** of 100:  $\frac{6}{10} \times \frac{10}{10} = \frac{60}{100}$ . Now the fractions have a **common** denominator. The fraction  $\frac{60}{100}$  is **greater than**  $\frac{2}{100}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

2. Find a fraction **equivalent** to  $\frac{2}{100}$  with a **numerator** of 6:  $\frac{2}{100} \times \frac{3}{3} = \frac{6}{300}$ . Now the fractions have a **common** numerator. The fraction  $\frac{6}{10}$  is **greater than**  $\frac{6}{300}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ .

3. Compare  $\frac{6}{10}$  and  $\frac{2}{100}$  to the **benchmark** fraction  $\frac{1}{2}$ . The fraction  $\frac{6}{10}$  is **greater than**  $\frac{1}{2}$ , and  $\frac{2}{100}$  is **less than**  $\frac{1}{2}$ . So,  $\frac{6}{10}$  is **greater than**  $\frac{2}{100}$ . You can also say that  $\frac{2}{100}$  is **less than**  $\frac{6}{10}$ .

# Center Activity Answer Key

## Activity 4.30

### Comparing Fractions

#### ★ Check Understanding

$$\frac{6}{8} > \frac{3}{12}$$

#### Recording Sheet

$$\text{Row 1: } \frac{1}{2} < \frac{4}{5}, \frac{8}{10} > \frac{2}{3}$$

$$\text{Row 2: } \frac{4}{6} > \frac{2}{8}, \frac{10}{12} = \frac{5}{6}$$

$$\text{Row 3: } \frac{4}{10} < \frac{8}{12}, \frac{2}{3} < \frac{3}{4}$$

#### ★★ Check Understanding

$$\frac{6}{8} > \frac{3}{12}$$

#### Recording Sheet

$$\text{Row 1: } \frac{1}{2} < \frac{4}{5}, \frac{8}{10} > \frac{2}{3}$$

$$\text{Row 2: } \frac{4}{6} > \frac{2}{8}, \frac{10}{12} = \frac{5}{6}$$

$$\text{Row 3: } \frac{4}{10} < \frac{8}{12}, \frac{2}{3} < \frac{3}{4}$$

$$\text{Row 4: } \frac{3}{6} > \frac{1}{3}, \frac{6}{8} < \frac{10}{12}$$

$$\text{Row 5: } \frac{2}{5} = \frac{6}{15}, \frac{5}{6} > \frac{3}{4}$$

#### ★★★ Check Understanding

$$\frac{6}{8} > \frac{3}{5}$$

#### Recording Sheet

$$\text{Row 1: } \frac{1}{2} < \frac{4}{5}; \text{ Sample answer: } \frac{7}{10}$$

$$\frac{6}{8} > \frac{3}{12}; \text{ Sample answer: } \frac{6}{12}$$

$$\text{Row 2: } \frac{4}{6} > \frac{2}{8}; \text{ Sample answer: } \frac{4}{12}$$

$$\frac{10}{12} = \frac{5}{6}$$

$$\text{Row 3: } \frac{4}{10} < \frac{8}{12}; \text{ Sample answer: } \frac{1}{2}$$

$$\frac{1}{3} < \frac{3}{4}; \text{ Sample answer: } \frac{5}{12}$$

$$\text{Row 4: } \frac{3}{6} > \frac{1}{3}; \text{ Sample answer: } \frac{5}{12}$$

$$\frac{6}{8} < \frac{10}{12}; \text{ Sample answer: } \frac{8}{10}$$

$$\text{Row 5: } \frac{2}{5} = \frac{6}{15}$$

$$\frac{4}{6} < \frac{3}{4}; \text{ Sample answer: } \frac{7}{10}$$

# Center Activity Answer Key

## Activity 4.61

### Make a Whole!

#### ★ Check Understanding

Possible answer:

$$\frac{4}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$$

$$\frac{4}{6} = \frac{2}{6} + \frac{2}{6}$$

$$\frac{4}{6} = \frac{3}{6} + \frac{1}{6}$$

#### Sample Answers

Students decompose fractions into a sum of fractions with like denominators and with numerators that have a sum equal to the numerator of the original fraction in as many unique ways as possible.

Sample answer for  $\frac{3}{4}$ :

$$\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

$$\frac{3}{4} = \frac{1}{4} + \frac{2}{4}$$

#### ★★ Check Understanding

Possible answer:

$$\frac{5}{8} = \frac{3}{8} + \frac{2}{8}$$

$$\frac{5}{8} = \frac{3}{8} + \frac{1}{8} + \frac{1}{8}$$

$$\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$$

#### Sample Answers

Students decompose fractions into a sum of fractions with like denominators and with numerators that have a sum equal to the numerator of the original fraction in as many unique ways as possible.

Sample answer for  $\frac{4}{6}$ :

$$\frac{4}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$$

$$\frac{4}{6} = \frac{2}{6} + \frac{1}{6} + \frac{1}{6}$$

$$\frac{4}{6} = \frac{2}{6} + \frac{2}{6}$$

$$\frac{4}{6} = \frac{3}{6} + \frac{1}{6}$$

#### ★★★ Check Understanding

Possible answer:

$$\frac{7}{10} = \frac{6}{10} + \frac{1}{10}$$

$$\frac{7}{10} = \frac{5}{10} + \frac{2}{10}$$

$$\frac{7}{10} = \frac{4}{10} + \frac{3}{10}$$

#### Sample Answers

Students decompose fractions into a sum of fractions with like denominators and with numerators that have a sum equal to the numerator of the original fraction in as many unique ways as possible. Students also draw a visual fraction model to justify each way.

Sample answer for  $\frac{5}{8}$ :

$$\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$$

$$\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{2}{8}$$

$$\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{3}{8}$$

$$\frac{5}{8} = \frac{1}{8} + \frac{4}{8}$$

$$\frac{5}{8} = \frac{2}{8} + \frac{3}{8}$$

Students should also draw a visual fraction model for each way shown to decompose  $\frac{5}{8}$ .

# Center Activity Answer Key

## Activity 4.31

### Different Ways to Show Sums

#### ★ Check Understanding

Sample answer:  $\frac{2}{12} + \frac{3}{12}, \frac{2}{12} + \frac{1}{12} + \frac{2}{12}$

#### Game Board

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

Toss 2:  $\frac{2}{6} + \frac{3}{6}, \frac{1}{6} + \frac{4}{6}, \frac{3}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{2}{6} + \frac{1}{6}$

Toss 3:  $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}, \frac{1}{8} + \frac{2}{8}, \frac{2}{8} + \frac{1}{8}$

Toss 4:  $\frac{2}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{2}{6}, \frac{3}{6}, \frac{1}{6} + \frac{2}{6} + \frac{1}{6}$

Toss 5:  $\frac{1}{6} + \frac{2}{6}, \frac{1}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{1}{6}$

Toss 6:  $\frac{4}{8} + \frac{3}{8}, \frac{2}{8} + \frac{2}{8} + \frac{3}{8}, \frac{1}{8} + \frac{3}{8} + \frac{3}{8}, \frac{1}{8} + \frac{2}{8} + \frac{4}{8},$   
 $\frac{2}{8} + \frac{5}{8}$

#### ★★ Check Understanding

Sample answer:  $\frac{2}{12} + \frac{3}{12}, \frac{2}{12} + \frac{1}{12} + \frac{2}{12}$

$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{2}{12}$

#### Game Board

Toss 1:  $\frac{2}{8} + \frac{3}{8} + \frac{4}{8}, \frac{3}{8} + \frac{3}{8}, \frac{4}{8} + \frac{3}{8} + \frac{1}{8} + \frac{1}{8}$

Toss 2:  $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{3}{6}, \frac{2}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6},$   
 $\frac{3}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{2}{6} + \frac{1}{6}, \frac{1}{6} + \frac{2}{6} + \frac{1}{6} + \frac{1}{6}$

Toss 3:  $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}, \frac{1}{8} + \frac{2}{8}, \frac{2}{8} + \frac{1}{8}$

Toss 4:  $\frac{2}{6} + \frac{1}{6} + \frac{1}{6}, \frac{1}{6} + \frac{2}{6} + \frac{2}{6},$   
 $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

Toss 5:  $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{5}{6}, \frac{4}{6} + \frac{2}{6} + \frac{1}{6} + \frac{1}{6}, \frac{3}{6} + \frac{5}{6},$   
 $\frac{2}{6} + \frac{2}{6} + \frac{4}{6}$

Toss 6:  $\frac{4}{8} + \frac{3}{8}, \frac{4}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}, \frac{2}{8} + \frac{2}{8} + \frac{3}{8},$   
 $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{3}{8}, \frac{1}{8} + \frac{2}{8} + \frac{1}{8} + \frac{2}{8} + \frac{1}{8}$

#### ★★★ Check Understanding

Sample answer:  $\frac{2}{12} + \frac{3}{12}, \frac{2}{12} + \frac{1}{12} + \frac{2}{12},$   
 $\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{2}{12}, \frac{1}{12} + \frac{4}{12}$

#### Game Board

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

Sample answer:  $\frac{2}{8} + \frac{7}{8}$

Toss 2:  $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{3}{6}, \frac{2}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6},$   
 $\frac{3}{6} + \frac{1}{6} + \frac{1}{6}, \frac{2}{6} + \frac{2}{6} + \frac{1}{6}, \frac{1}{6} + \frac{2}{6} + \frac{1}{6} + \frac{1}{6}$

Sample answer:  $\frac{4}{6} + \frac{1}{6}$

Toss 3:  $\frac{1}{8} + \frac{2}{8}, \frac{2}{8} + \frac{1}{8}$

Sample answer:  $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}$

Toss 4:  $\frac{2}{6} + \frac{1}{6} + \frac{1}{6}, \frac{1}{6} + \frac{2}{6} + \frac{2}{6},$   
 $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

Sample answer:  $\frac{1}{6} + \frac{3}{6}$

Toss 5:  $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{5}{6}, \frac{4}{6} + \frac{2}{6} + \frac{1}{6} + \frac{1}{6}, \frac{3}{6} + \frac{5}{6},$   
 $\frac{2}{6} + \frac{2}{6} + \frac{4}{6}$

Sample answer:  $\frac{2}{6} + \frac{1}{6} + \frac{1}{6} + \frac{3}{6}$

Toss 6:  $\frac{4}{8} + \frac{3}{8}, \frac{4}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}, \frac{2}{8} + \frac{2}{8} + \frac{3}{8},$   
 $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{3}{8}, \frac{1}{8} + \frac{2}{8} + \frac{1}{8} + \frac{2}{8} + \frac{1}{8}$

Sample answer:  $\frac{3}{8} + \frac{3}{8} + \frac{1}{8}$