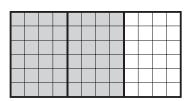
# **Equivalent Fractions**

#### **COMMON CORE STANDARD CC.4.NF.1**

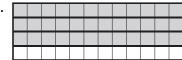
Extend understanding of fraction equivalence and ordering.

Use the model to write an equivalent fraction.





2.



 $\overline{6}$ 



Tell whether the fractions are equivalent. Write = or  $\neq$ .

- 3.  $\frac{8}{10}$   $\frac{4}{5}$
- **4.**  $\frac{1}{2}$   $\frac{7}{12}$
- **5.**  $\frac{3}{4}$   $\bigcirc \frac{8}{12}$  **6.**  $\frac{2}{3}$   $\bigcirc \frac{4}{6}$

- 7.  $\frac{5}{8}$   $\frac{4}{10}$
- **8.**  $\frac{2}{6}$   $\frac{4}{12}$
- 9.  $\frac{20}{100}$   $\bigcirc \frac{1}{5}$  10.  $\frac{5}{8}$   $\bigcirc \frac{9}{10}$

# Problem Solving REAL WORLD



- **11.** Jamal finished  $\frac{5}{6}$  of his homework. Margaret finished  $\frac{3}{4}$  of her homework, and Steve finished  $\frac{10}{12}$  of his homework. Which two students finished the same amount of homework?
- 12. Sophia's vegetable garden is divided into 12 equal sections. She plants carrots in 8 of the sections. Write two fractions that are equivalent to the part of Sophia's garden that is planted with carrots.

# TEST

### Lesson Check (CC.4.NF.1)

- **1.** A rectangle is divided into 8 equal parts. Two parts are shaded. Which fraction is equivalent to the shaded area of the rectangle?
  - **A**  $\frac{1}{4}$
  - **B**  $\frac{1}{3}$
  - $\bigcirc \frac{2}{6}$
  - ①  $\frac{3}{4}$

- **2.** Jeff uses 3 fifth-size strips to model  $\frac{3}{5}$ . He wants to use tenth-size strips to model an equivalent fraction. How many tenth-size strips will he need?
  - **(A)** 10
  - **(B)** 6
  - **©** 5
  - **(D)** 3

## **Spiral Review** (CC.4.OA.3, CC.4.OA.4, CC.4.NBT.5, CC.4.NBT.6)

- 3. Cassidy places 40 stamps on each of 8 album pages. How many stamps does she place in all? (Lesson 2.3)
  - **(A)** 300
  - **B** 320
  - **©** 360
  - **(D)** 380

- **4.** Maria and 3 friends have 1,200 soccer cards. If they share the soccer cards equally, how many will each person receive? (Lesson 4.4)
  - **(A)** 30
- **©** 300
- **(B)** 40
- **(D)** 400

- 5. Six groups of students sell 162 balloons at the school carnival. There are 3 students in each group. If each student sells the same number of balloons, how many balloons does each student sell?

  (Lesson 4.12)
  - **A** 9
  - **B** 18
  - **©** 27
  - **(D)** 54

**6.** Four students each made a list of prime numbers.

Eric: 5, 7, 17, 23

Maya: 3, 5, 13, 17

Bella: 2, 3, 17, 19

Jordan: 7, 11, 13, 21

Who made an error and included a composite number? (Lesson 5.5)

- (A) Eric
- **B** Maya
- © Bella
- (D) Jordan

# **Generate Equivalent Fractions**

#### **COMMON CORE STANDARD CC.4.NF.1**

Extend understanding of fraction equivalence and ordering.

Write two equivalent fractions for each.

1. 
$$\frac{1}{3}$$

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

 $\frac{1\times4}{3\times4}=\frac{4}{12}$ 

**2.** 
$$\frac{2}{3}$$

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

4. 
$$\frac{4}{5}$$

Tell whether the fractions are equivalent. Write = or  $\neq$ .

**5.** 
$$\frac{1}{4}$$
  $\bigcirc \frac{3}{12}$  **6.**  $\frac{4}{5}$   $\bigcirc \frac{5}{10}$ 

6. 
$$\frac{4}{5}$$
  $\frac{5}{10}$ 

7. 
$$\frac{3}{8}$$
  $\bigcirc \frac{2}{6}$ 

**8.** 
$$\frac{3}{4}$$
  $\bigcirc \frac{6}{8}$ 

**9.** 
$$\frac{5}{6}$$
  $\frac{10}{12}$ 

**10.** 
$$\frac{6}{12}$$
  $\frac{5}{8}$  **11.**  $\frac{2}{5}$   $\frac{4}{10}$  **12.**  $\frac{2}{4}$   $\frac{3}{12}$ 

**11.** 
$$\frac{2}{5}$$
  $\bigcirc \frac{4}{10}$ 

**12.** 
$$\frac{2}{4}$$
  $\frac{3}{12}$ 

# Problem Solving | REAL WORLD



- 13. Jan has a 12-ounce milkshake. Four ounces in the milkshake are vanilla, and the rest is chocolate. What are two equivalent fractions that represent the fraction of the milkshake that is vanilla?
- **14.** Kareem lives  $\frac{4}{10}$  of a mile from the mall. Write two equivalent fractions that show what fraction of a mile Kareem lives from the mall.

### **Lesson Check** (CC.4.NF.1)

- **1.** Jessie colored a poster. She colored  $\frac{2}{5}$ of the poster red. Which fraction is equivalent to  $\frac{2}{5}$ ?
  - **A**  $\frac{4}{10}$
- **B**  $\frac{7}{10}$

- **2.** Marcus makes a punch that is  $\frac{1}{4}$ cranberry juice. Which two fractions are equivalent to  $\frac{1}{4}$ ?
- (A)  $\frac{2}{5'} \frac{3}{12}$  (C)  $\frac{3}{4'} \frac{6}{8}$  (B)  $\frac{2}{8'} \frac{4}{12}$  (D)  $\frac{2}{8'} \frac{3}{12}$

### Spiral Review (CC.4.OA.3, CC.4.OA.5, CC.4.NBT.5)

- 3. An electronics store sells a large flat screen television for \$1,699. Last month, the store sold 8 of these television sets. About how much money did the store make on the television sets? (Lesson 2.4)
  - **(A)** \$160,000
  - **(B)** \$16,000
  - \$8,000
  - **(D)** \$1,600
- **5.** Diana had 41 stickers. She put them in 7 equal groups. She put as many as possible in each group. She gave the leftover stickers to her sister. How many stickers did Diana give to her sister? (Lesson 4.3)
  - (A) 3
  - **B**) 4
  - **(C)** 5
  - **(D)** 6

- 4. Matthew has 18 sets of baseball cards. Each set has 12 cards. About how many baseball cards does Matthew have in all? (Lesson 3.2)
  - **(A)** 300
  - **(B)** 200
  - **(C)** 150
  - **(D)** 100
- **6.** Christopher wrote the number pattern below. The first term is 8.

8, 6, 9, 7, 10, ...

Which is a rule for the pattern? (Lesson 5.6)

- (A) Add 2, add 3.
- **(B)** Add 6, subtract 3.
- C Subtract 6, add 3.
- (D) Subtract 2, add 3.

# **Simplest Form**

 $\frac{6}{10} = \frac{6 \div 2}{10 \div 2} = \frac{3}{5}$ 

#### **COMMON CORE STANDARD CC.4.NF.1**

Extend understanding of fraction equivalence and ordering.

Write the fraction in simplest form.

1. 
$$\frac{6}{10}$$

2. 
$$\frac{6}{8}$$

3. 
$$\frac{5}{5}$$

**4.** 
$$\frac{8}{12}$$

5. 
$$\frac{100}{100}$$

6. 
$$\frac{2}{6}$$

7. 
$$\frac{2}{8}$$

8. 
$$\frac{4}{10}$$

Tell whether the fractions are equivalent. Write = or  $\neq$ .

**9.** 
$$\frac{6}{12}$$
  $\bigcirc \frac{1}{12}$ 

**10.** 
$$\frac{3}{4}$$
  $\bigcirc \frac{5}{6}$ 

**10.** 
$$\frac{3}{4} \bigcirc \frac{5}{6}$$
 **11.**  $\frac{6}{10} \bigcirc \frac{3}{5}$  **12.**  $\frac{3}{12} \bigcirc \frac{1}{3}$ 

**12.** 
$$\frac{3}{12}$$
  $\bigcirc \frac{1}{3}$ 

**13.** 
$$\frac{6}{10}$$
  $\bigcirc \frac{60}{100}$ 

**14.** 
$$\frac{11}{12}$$
  $\frac{9}{10}$ 

**15.** 
$$\frac{2}{5}$$
  $\frac{8}{20}$ 

**16.** 
$$\frac{4}{8}$$
  $\bigcirc \frac{1}{2}$ 

# Problem Solving | REAL WORLD

- 17. At Memorial Hospital, 9 of the 12 babies born on Tuesday were boys. In simplest form, what fraction of the babies born on Tuesday were boys?
- **18.** Cristina uses a ruler to measure the length of her math textbook. She says that the book is  $\frac{4}{10}$  meter long. Is her measurement in simplest form? If not, what is the length of the book in simplest form?

# TEST

### Lesson Check (CC.4.NF.1)

- 1. Six out of the 12 members of the school choir are boys. In simplest form, what fraction of the choir is boys?
  - **A**  $\frac{1}{6}$
  - **B**  $\frac{6}{12}$
  - ©  $\frac{1}{2}$
  - $\bigcirc \frac{12}{6}$

- **2.** Which of the following fractions is in simplest form?
  - **A**  $\frac{5}{6}$
  - $\bigcirc 8 \frac{6}{8}$
  - $\bigcirc \frac{8}{10}$
  - $\bigcirc \frac{2}{12}$

# **Spiral Review** (CC.4.OA.3, CC.4.OA.4, CC.4.NBT.5, CC.4.NE1)

- **3.** Each of the 23 students in Ms. Evans' class raised \$45 for the school by selling coupon books. How much money did the class raise in all? (Lesson 3.5)
  - **(A)** \$207
- **(C)** \$1,025
- **(B)** \$225
- **(D)** \$1,035

- **4.** Which pair of numbers below have 4 and 6 as common factors? (Lesson 5.3)
  - **(A)** 12, 18
  - **B** 20, 24
  - **©** 28, 30
  - **(D)** 36, 48
- **5.** Bart uses  $\frac{3}{12}$  cup milk to make muffins. Which fraction is equivalent to  $\frac{3}{12}$ ? (Lesson 6.2)
  - **A**  $\frac{1}{4}$
  - **B**  $\frac{1}{3}$
  - ©  $\frac{1}{2}$
  - ①  $\frac{2}{3}$

- 6. Ashley bought 4 packages of juice boxes. There are 6 juice boxes in each package. She gave 2 juice boxes to each of 3 friends. How many juice boxes does Ashley have left? (Lesson 2.12)
  - **(A)** 24
  - **(B)** 22
  - **(C)** 18
  - **(D)** 12

# **Common Denominators**

#### **COMMON CORE STANDARD CC.4.NF.1**

Extend understanding of fraction equivalence and ordering.

Write the pair of fractions as a pair of fractions with a common denominator.

**1.** 
$$\frac{2}{3}$$
 and  $\frac{3}{4}$ 

**2.** 
$$\frac{1}{4}$$
 and  $\frac{2}{3}$  **3.**  $\frac{3}{10}$  and  $\frac{1}{2}$ 

Think: Find a common multiple. 3: 3, 6, 9, (12), 15

4: 4, 8, 12, 16, 20

**4.** 
$$\frac{3}{5}$$
 and  $\frac{3}{4}$ 

**5.** 
$$\frac{2}{4}$$
 and  $\frac{7}{8}$ 

**4.** 
$$\frac{3}{5}$$
 and  $\frac{3}{4}$  **5.**  $\frac{2}{4}$  and  $\frac{7}{8}$  **6.**  $\frac{2}{3}$  and  $\frac{5}{12}$  **7.**  $\frac{1}{4}$  and  $\frac{1}{6}$ 

**7.** 
$$\frac{1}{4}$$
 and  $\frac{1}{6}$ 

Tell whether the fractions are equivalent. Write = or  $\neq$ .

**8.** 
$$\frac{1}{2}$$
  $\frac{2}{5}$ 

**9.** 
$$\frac{1}{2}$$
  $\bigcirc \frac{3}{6}$ 

**10.** 
$$\frac{3}{4}$$
  $\bigcirc \frac{5}{6}$ 

**8.** 
$$\frac{1}{2}\bigcirc\frac{2}{5}$$
 **9.**  $\frac{1}{2}\bigcirc\frac{3}{6}$  **10.**  $\frac{3}{4}\bigcirc\frac{5}{6}$  **11.**  $\frac{6}{10}\bigcirc\frac{3}{5}$ 

**12.** 
$$\frac{6}{8}$$
  $\frac{3}{4}$ 

**13.** 
$$\frac{3}{4}$$
  $\bigcirc$   $\frac{2}{3}$ 

**12.** 
$$\frac{6}{8} \bigcirc \frac{3}{4}$$
 **13.**  $\frac{3}{4} \bigcirc \frac{2}{3}$  **14.**  $\frac{2}{10} \bigcirc \frac{4}{5}$  **15.**  $\frac{1}{4} \bigcirc \frac{3}{12}$ 

**15.** 
$$\frac{1}{4}$$
  $\frac{3}{12}$ 

# Problem Solving | REAL WORLD

- **16.** Adam drew two same size rectangles and divided them into the same number of equal parts. He shaded  $\frac{1}{3}$  of one rectangle and  $\frac{1}{4}$  of other rectangle. What is the least number of parts into which both rectangles could be divided?
- 17. Mera painted equal sections of her bedroom wall to make a pattern. She painted  $\frac{2}{5}$  of the wall white and  $\frac{1}{2}$  of the wall lavender. Write an equivalent fraction for each using a common denominator.

# PREP

# Lesson Check (CC.4.NF.1)

- **1.** Which of the following is a common denominator of  $\frac{1}{4}$  and  $\frac{5}{6}$ ?
  - **(A)** 8
  - **B** 9
  - **©** 12
  - **(D)** 15

- **2.** Two fractions have a common denominator of 8. Which of the following could be the two fractions?
  - $\bigcirc$   $\frac{1}{2}$  and  $\frac{2}{3}$
  - $\bigcirc$  B  $\frac{1}{4}$  and  $\frac{1}{2}$
  - $\bigcirc \frac{3}{4}$  and  $\frac{1}{6}$
  - $\bigcirc$   $\frac{1}{2}$  and  $\frac{4}{5}$

# Spiral Review (CC.4.NBT.2, CC.4.NBT.5, CC.4.NBT.6, CC.4.NF.1)

- 3. Which number is 100,000 more than seven hundred two thousand, eighty-three? (Lesson 1.2)
  - **(A)** 703,083
  - **B** 712,083
  - **©** 730,083
  - **(D)** 802,083

- **4.** Aiden baked 8 dozen muffins. How many total muffins did he bake? (Lesson 2.10)
  - **(A)** 64
  - **B** 80
  - **©** 96
  - **(D)** 104
- 5. On a bulletin board, the principal,
  Ms. Gomez, put 115 photos of the fourthgrade students in her school. She put
  the photos in 5 equal rows. How many
  photos did she put in each row? (Lesson 4.11)
  - **(A)** 21
  - **(B)** 23
  - **©** 25
  - **(D)** 32

- **6.** Judy uses 12 tiles to make a mosaic. Eight of the tiles are blue. What fraction, in simplest form, represents the tiles that are blue? (Lesson 6.3)
  - **A**  $\frac{2}{3}$
  - **B**  $\frac{2}{5}$
  - $\bigcirc \frac{3}{4}$
  - $\bigcirc \frac{12}{18}$