

Name _____

Write Fractions as Sums**COMMON CORE STANDARD—4.NF.3b**
*Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.***Write the fraction as a sum of unit fractions.**

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

Think: Add $\frac{1}{5}$ four times.

2. $\frac{3}{8} =$ _____

3. $\frac{6}{12} =$ _____

4. $\frac{4}{4} =$ _____

Write the fraction as a sum of fractions three different ways.

5. $\frac{7}{10}$

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

Problem Solving

7. Miguel's teacher asks him to color
- $\frac{4}{8}$
- of his grid. He must use 3 colors: red, blue, and green. There must be more green sections than red sections. How can Miguel color the sections of his grid to follow all the rules?
-
- _____
-
- _____
-
- _____

8. Petra is asked to color
- $\frac{6}{6}$
- of her grid. She must use 3 colors: blue, red, and pink. There must be more blue sections than red sections or pink sections. What are the different ways Petra can color the sections of her grid and follow all the rules?
-
- _____
-
- _____
-
- _____

Lesson Check (4.NF.3b)

1. Jorge wants to write $\frac{4}{5}$ as a sum of unit fractions. What should he write?
2. What fraction is equivalent to the expression $\frac{4}{8} + \frac{2}{8} + \frac{1}{8}$?

Spiral Review (4.OA.3, 4.OA.4, 4.NBT.6, 4.NF.3a)

3. An apple is cut into 6 equal slices. Nancy eats 2 of the slices. What fraction of the apple is left?
4. Which of these numbers is a prime number: 1, 11, 21, 51?

5. A teacher has a bag of 100 unit cubes. She gives an equal number of cubes to each of the 7 groups in her class. She gives each group as many cubes as she can. How many unit cubes are left over?
6. Jessie sorted the coins in her bank. She made 7 stacks of 6 dimes and 8 stacks of 5 nickels. She then found 1 dime and 1 nickel. How many dimes and nickels does Jessie have in all?

Name _____

Add Fractions Using Models



COMMON CORE STANDARD—4.NF.3d
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Find the sum. Use fraction strips to help.

1. $\frac{2}{6} + \frac{1}{6} = \frac{\quad}{\quad}$

2. $\frac{4}{10} + \frac{5}{10} = \underline{\hspace{2cm}}$

3. $\frac{1}{3} + \frac{2}{3} = \underline{\hspace{2cm}}$

4. $\frac{2}{4} + \frac{1}{4} = \underline{\hspace{2cm}}$

5. $\frac{2}{12} + \frac{4}{12} = \underline{\hspace{2cm}}$

6. $\frac{1}{6} + \frac{2}{6} = \underline{\hspace{2cm}}$

7. $\frac{3}{12} + \frac{9}{12} = \underline{\hspace{2cm}}$

8. $\frac{3}{8} + \frac{4}{8} = \underline{\hspace{2cm}}$

9. $\frac{3}{4} + \frac{1}{4} = \underline{\hspace{2cm}}$

10. $\frac{1}{5} + \frac{2}{5} = \underline{\hspace{2cm}}$

Problem Solving



11. Lola walks $\frac{4}{10}$ mile to her friend's house. Then she walks $\frac{5}{10}$ mile to the store. How far does she walk in all?

12. Evan eats $\frac{1}{8}$ of a pan of lasagna and his brother eats $\frac{2}{8}$ of it. What fraction of the pan of lasagna do they eat?

13. Jacqueline buys $\frac{2}{4}$ yard of green ribbon and $\frac{1}{4}$ yard of pink ribbon. How many yards of ribbon does she buy?

14. Shu mixes $\frac{2}{3}$ pound of peanuts with $\frac{1}{3}$ pound of almonds. How many pounds of nuts does Shu mix?

Lesson Check (4.NF.3d)

1. Mary Jane has $\frac{3}{8}$ of a medium pizza left. Hector has $\frac{2}{8}$ of another medium pizza left. How much pizza do they have altogether? Use models to help.
2. Jeannie ate $\frac{1}{4}$ of an apple. Kelly ate $\frac{2}{4}$ of the apple. How much did they eat together? Use models to help.

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

3. Karen is making 14 different kinds of greeting cards. She is making 12 of each kind. How many greeting cards is she making?
4. Jefferson works part time and earns \$1,520 in four weeks. How much does he earn each week?
5. By installing efficient water fixtures, the average American can reduce water use to about 45 gallons of water per day. Using such water fixtures, about how many gallons of water would the average American use in December?
6. Collin is making a bulletin board and note center. He is using square cork tiles and square dry-erase tiles. One of every 3 squares will be a cork square. If he uses 12 squares for the center, how many will be cork squares?

Name _____

Subtract Fractions Using Models



COMMON CORE STANDARD—4.NF.3d
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Subtract. Use fraction strips to help.

1. $\frac{4}{5} - \frac{1}{5} =$ $\frac{3}{5}$

2. $\frac{3}{4} - \frac{1}{4} =$

3. $\frac{5}{6} - \frac{1}{6} =$ _____

4. $\frac{7}{8} - \frac{1}{8} =$ _____

5. $1 - \frac{2}{3} =$ _____

6. $\frac{8}{10} - \frac{2}{10} =$ _____

7. $\frac{3}{4} - \frac{1}{4} =$ _____

8. $\frac{7}{6} - \frac{5}{6} =$ _____

Problem Solving

Use the table for 9 and 10.

9. Ena is making trail mix. She buys the items shown in the table. How many more pounds of pretzels than raisins does she buy?

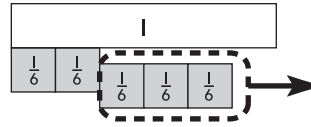
10. How many more pounds of granola than banana chips does she buy?

Item	Weight (in pounds)
Pretzels	$\frac{7}{8}$
Peanuts	$\frac{4}{8}$
Raisins	$\frac{2}{8}$
Banana Chips	$\frac{3}{8}$
Granola	$\frac{5}{8}$

Lesson Check (4.NF.3d)

1. Lee reads for $\frac{3}{4}$ hour in the morning and $\frac{2}{4}$ hour in the afternoon. How much longer does Lee read in the morning than in the afternoon? Use models to help.

2. What equation does the model below represent?



Spiral Review (4.NBT.5, 4.NF.2, 4.NF.3d)

3. A city received 2 inches of rain each day for 3 days. The meteorologist said that if the rain had been snow, each inch of rain would have been 10 inches of snow. How much snow would that city have received in the 3 days?

4. At a party there were four large submarine sandwiches, all the same size. During the party, $\frac{2}{3}$ of the chicken sandwich, $\frac{3}{4}$ of the tuna sandwich, $\frac{7}{12}$ of the roast beef sandwich, and $\frac{5}{6}$ of the veggie sandwich were eaten. Which sandwich had the least amount left?

5. Deena uses $\frac{3}{8}$ cup milk and $\frac{2}{8}$ cup oil in a recipe. How much liquid is this?

6. In the car lot, $\frac{4}{12}$ of the cars are white and $\frac{3}{12}$ of the cars are blue. What fraction of the cars in the lot are either white or blue?

Name _____

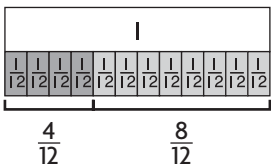
Add and Subtract Fractions



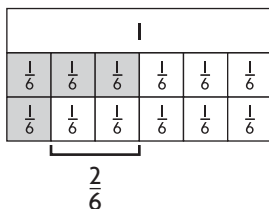
COMMON CORE STANDARDS—4.NF.3d
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Find the sum or difference.

$$1. \frac{4}{12} + \frac{8}{12} = \frac{12}{12}$$



$$2. \frac{3}{6} - \frac{1}{6} =$$



$$3. \frac{4}{5} - \frac{3}{5} =$$

$$4. \frac{6}{10} + \frac{3}{10} =$$

$$5. 1 - \frac{3}{8} =$$

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

$$7. \frac{9}{12} - \frac{5}{12} =$$

$$8. \frac{5}{6} - \frac{2}{6} =$$

$$9. \frac{2}{3} + \frac{1}{3} =$$

Problem Solving



Use the table for 10 and 11.

10. Guy finds how far his house is from several locations and makes the table shown. How much farther away from Guy's house is the library than the cafe?

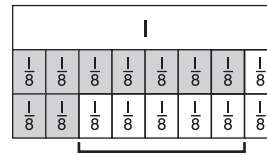
11. If Guy walks from his house to school and back, how far does he walk?

Distance from Guy's House	
Location	Distance (in miles)
Library	$\frac{9}{10}$
School	$\frac{5}{10}$
Store	$\frac{7}{10}$
Cafe	$\frac{4}{10}$
Yogurt Shop	$\frac{6}{10}$

Lesson Check (4.NF.3d)

1. Mr. Angulo buys $\frac{5}{8}$ pound of red grapes and $\frac{3}{8}$ pound of green grapes. How many pounds of grapes did Mr. Angulo buy?

2. What equation does the model below represent?



Spiral Review (4.OA.3, 4.NBT.5, 4.NF.3d)

3. There are 6 muffins in a package. How many packages will be needed to feed 48 people if each person has 2 muffins?

4. Camp Oaks gets 32 boxes of orange juice and 56 boxes of apple juice. Each shelf in the cupboard can hold 8 boxes of juice. What is the least number of shelves needed for all the juice boxes?

5. A machine makes 18 parts each hour. If the machine operates 24 hours a day, how many parts can it make in one day?

6. What equation does the model below represent?

