

Fifth Grade Test

Name \_\_\_\_\_ Teacher \_\_\_\_\_ Date \_\_\_\_\_

**5.NF.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions.

**Solve.**

1. Use the following models and add the fractions.



$$\frac{2}{4} + \frac{2}{8} =$$

- a.  $\frac{3}{4}$                       b.  $\frac{5}{8}$                       c.  $\frac{1}{2}$

2.  $2\frac{8}{10} - 1\frac{3}{5} =$

- a.  $1\frac{2}{5}$                       b.  $1\frac{1}{5}$

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

- a.  $5\frac{1}{2}$                       b.  $5\frac{1}{6}$

**5.NF.2** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators.

4. Cory read  $\frac{1}{6}$  of her book on Sunday and  $\frac{2}{3}$  of her book on Monday. How much of her book has she read altogether?

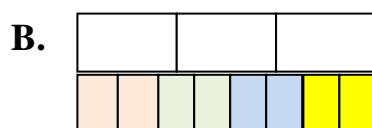
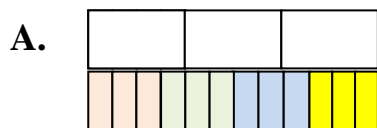
- a.  $\frac{1}{2}$                       b.  $\frac{5}{6}$                       c.  $\frac{3}{9}$

5. Derek ate  $\frac{1}{4}$  of a pizza for lunch, and Matt ate  $\frac{2}{3}$  of the same pizza. How much more pizza did Matt eat than Derek?

- a.  $\frac{2}{5}$                       b.  $\frac{5}{6}$                       c.  $\frac{5}{12}$

**5.NF.3 Interpret fractions as division of the numerator by the denominator.**

6. Four students in Mrs. Vaughn's class were asked to share 3 packs of paper. If each person received the same amount of paper, what fractional amount of paper did each student receive? Choose the illustration that solves the problem.



a. A

b. B

c. both A and B

**5.NF.4(a) Interpret the product as  $a$  parts of a partition of  $q$  into  $b$  equal parts. ( $a/b = a \div b$ ).**

7. Three-fourths of the class are girls. Two-thirds of the girls are wearing tennis shoes. What fraction of the class are girls wearing tennis shoes?

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

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

c.  $\frac{1}{4}$

8. Two-thirds of Cheryl's golf balls are white. One-fourth of those golf balls are new. What fraction of Cheryl's golf balls are new and white?

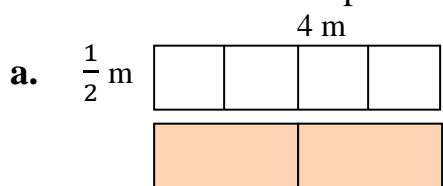
a.  $\frac{1}{3}$

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

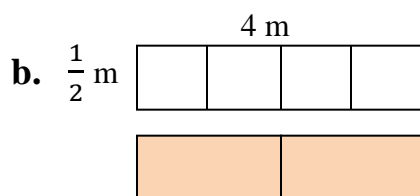
c.  $\frac{1}{6}$

**5.NF.4(b) Find the area of a rectangle with fractional side lengths.**

9. A rug measures 4 meters by  $\frac{1}{2}$  meter. What is the area of the rug? Choose the illustration that solves the problem.



$$4 \times \frac{1}{2} = \frac{4}{2} = 2 \text{ m}^2$$



$$4 \div \frac{1}{2} = 4 \times \frac{2}{1} = 8 \text{ m}^2$$

10. Clyde's garden measures 6 feet by  $5\frac{1}{2}$  feet. What is the area of Clyde's garden?

a.  $30\frac{1}{2} \text{ ft}$

b.  $66^2 \text{ ft}$

c.  $33^2 \text{ ft}$

**5.NF.5(a) Interpret multiplication by comparing the size of a product to the size of one factor on the basis of the size of the other factor.**

**11.** Which is a good estimate of  $3\frac{1}{4} \times 1\frac{5}{6}$  ?

**a.**  $3 \times 1$

**b.**  $3 \times 2$

**c.**  $4 \times 2$

**5.NF.5(b)**

**12.** Mrs. Carmichael is planting a flower bed. The flower bed is 5 meters long and  $\frac{5}{6}$  meters wide. Why will the area of the flower bed be smaller than 5 meters long?

**a.** The fraction  $\frac{5}{6}$  is smaller than one, so the product is smaller than the whole number.

**b.** Multiplying a whole number by any fraction results in a smaller number.

**5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers.**

**13.** Lucy painted a picture that measures  $3\frac{1}{2}$  feet by  $2\frac{3}{4}$  feet. What is the area of the mural?

**a.**  $11\frac{1}{4}^2$  ft

**b.**  $6\frac{3}{8}$

**c.**  $9\frac{5}{8}^2$  ft

**14.** There are about 8 million small pleasure boats in the United States. About  $\frac{2}{3}$  of these boats are motorboats. About how many motorboats are there in the United States?

**a.**  $5\frac{1}{3}$

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

**c.**  $6\frac{1}{3}$

**5.NF.7(a) Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.**

**Solve.**

**15.**  $\frac{1}{3} \div 2 =$

**a.**  $1\frac{1}{2}$

**b.** 6

**c.**  $\frac{1}{6}$

**16.**  $\frac{1}{4} \div 6 =$

**a.** 24

**b.**  $1\frac{1}{2}$

**c.**  $\frac{1}{24}$

**5.NF.7(b) Interpret division of a whole number by a unit fraction, and compute such quotients.**

**17.** The bowl holds 5 liters of water. If we use a scoop that holds  $\frac{1}{6}$  of a liter, how many scoops will we need in order to fill the entire bowl?

- a.** 30      **b.** 20      **c.** 11

**18.** Edna is going to make a broccoli casserole. The recipe calls for 3 cups of cheddar cheese. Edna has cheddar cheese in packages that contain  $\frac{1}{2}$  cup of cheese. How many packages does she need to use to make the casserole?

- a.** 4      **b.** 2      **c.** 6

**5.NF.7(c) Solve real world problems involving division of unit fractions by non-zero whole number and division of numbers by unit fractions.**

**19.** You have  $\frac{1}{8}$  of a bag of pens and you need to share them among 3 people. How much of the bag does each person get?

- a.**  $\frac{1}{3}$       **b.**  $\frac{1}{24}$       **c.**  $\frac{1}{8}$

**20.** You have  $\frac{2}{3}$  of a pizza and you need to share it among 4 people. How much of the pizza does each person get?

- a.**  $2\frac{2}{3}$       **b.**  $\frac{3}{8}$       **c.**  $\frac{1}{6}$

**Answer Key for Fifth Grade Test**  
**Number and Operations**

<b>Standard</b>	<b>Answer</b>
<b>5.NF.1</b>	<b>1. a</b>
	<b>2. b</b>
	<b>3. b</b>
<b>5.NF.2</b>	<b>4. b</b>
	<b>5. c</b>
<b>5.NF.3</b>	<b>6. c</b>
<b>5.NF.4(a)</b>	<b>7. b</b>
	<b>8. c</b>
<b>5.NF.4(b)</b>	<b>9. a</b>
	<b>10. c</b>
<b>5.NF.5(a)</b>	<b>11. b</b>
<b>5.NF.5(b)</b>	<b>12. a</b>
<b>5.NF.6</b>	<b>13. c</b>
	<b>14. a</b>
<b>5.NF.7(a)</b>	<b>15. c</b>
	<b>16. c</b>
<b>5.NF.7(b)</b>	<b>17. a</b>
	<b>18. c</b>
<b>5.NF.7(c)</b>	<b>19. b</b>
	<b>20. c</b>