

4th Grade Unit 4: Multiply Fractions (Form A)

Name _____

Date _____

Standard:

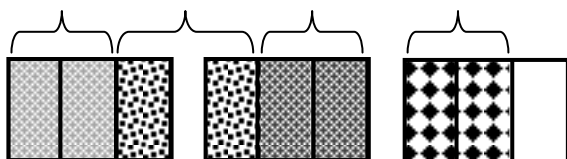
26.NF.4 apply and extend previous understanding of multiplication to multiply a fraction by a whole number

27.NF.4_a. recognize a fraction a/b as a multiple of $1/b$ (e.g., use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$)

28.NF.4_b. understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number (e.g., use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$; (In general, $n \times (a/b) = (n \times a)/b$)

29.NF.4_c. solve word problems involving multiplication of a fraction by a whole number (e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $3/8$ of a pound of roast beef and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?)

1. What equation does this visual fraction model express?



a. $\frac{2}{3} \times 4 = \frac{8}{12}$

b. $\frac{2}{3} \times 4 = \frac{8}{3}$

c. $\frac{2}{8} \times 3 = \frac{6}{8}$

d. $\frac{3}{3} \times 8 = \frac{24}{3}$

2. In a relay race, each runner runs $\frac{1}{2}$ of a lap. If there are 4 team members how many laps is the race?

Draw a model to show how you solved the problem.

3. There are 6 people coming to Tim's party. If each person will eat $\frac{3}{8}$ of a pizza, how many pizzas will Tim need to order?

- a. 1 pizza
- b. 2 pizzas
- c. 3 pizzas
- d. 4 pizzas

4. Solve:

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

Draw a fraction model to show how you solved the problem.

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5. Shane collected $\frac{3}{4}$ of a bin of recycling. Cameron collected 7 times as much recycling as Shane. How many bins of recycling did Cameron collect?

6. A Snickers snack pack has 8 candy bars. Dan ate half of them. Rita ate $\frac{1}{4}$ of the candy bars. How many candy bars did Dan eat? _____ How many candy bars did Rita eat? _____ Use the model to show your answer.



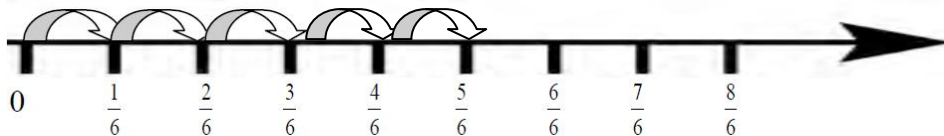
7. Each person in a family ate $\frac{3}{4}$ of a loaf of bread. There were 3 people in the family. How much bread was eaten?

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

8. After saving up for a while, Christopher had \$6.00 in his piggy bank. He spent $\frac{1}{3}$ of that money on candy. How much money did Christopher spend?

Draw a model to prove your answer:

9. The number line below shows $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{5}{6}$. Which expression below can also be used to represent the number line model?



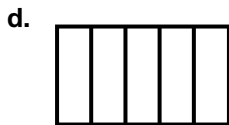
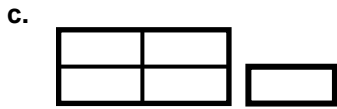
- a. $\frac{1}{6} \times 5$
- b. $\frac{1}{6} + 5$
- c. $\frac{1}{6} + \frac{2}{6} + \frac{3}{6}$
- d. $\frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6}$

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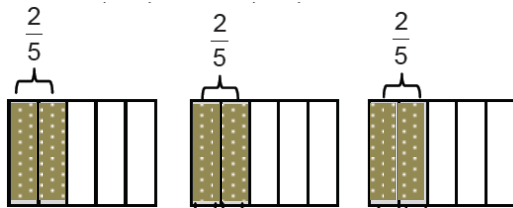
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10. Which of the following represents $5 \times \frac{1}{2}$?



11. This is a fraction model that displays $\frac{2}{5} \times 3$. Which other equation could be used to represent this same model?



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

b. $\frac{1}{5} \times 9$

c. $\frac{6}{5} \times 6$

d. $\frac{1}{5} \times 6$

12. Masha had 24 stamps. She gave her sister $\frac{1}{3}$ of the stamps and used $\frac{1}{4}$ to mail letters. How many stamps does Masha have left? _____



13. Sue has a bad habit. When she opens a bottle of water, she only drinks $\frac{1}{3}$ of it and wastes the rest. Today Sue drank from 7 bottles of water. Write an equation that shows the total amount of water Sue drank.

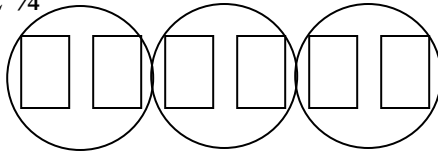
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Answer Key

1. b
2. 2 laps
3. c
4. $1\frac{1}{2}$ or $\frac{3}{2}$
5. $5\frac{1}{4}$
6. Dan ate 4, Rita ate 2
7. a. $2\frac{1}{4}$
8. \$2



9. a
10. b
11. d
12. Masha has 10 stamps left
13. $7 \times \frac{1}{3} = \frac{7}{3}$ or $2\frac{1}{3}$