

Fraction Action

Multiply fractions by whole numbers.

GRADE 4 • 4.NF.B.4c

CCSS.Math.Content.4.NF.B.4c "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 $\frac{3}{8}$ of a pound of roast beef..."

NAME _____

DATE _____

EQUAL FRACTION GROUPS

A whole number times a fraction means you have that many equal groups of the fraction. Multiply the whole number by the numerator, keep the denominator, and simplify if you can. You can sketch equal fraction strips to show the groups and check your equation.

WORKED EXAMPLE

Find $3 \times \frac{4}{11}$.

1. Write the equation: $3 \times \frac{4}{11}$.
2. Multiply the whole number and numerator: $3 \times \frac{4}{11} = \frac{12}{11}$.
3. Rename the improper fraction: $\frac{12}{11} = 1 \frac{1}{11}$.

Answer: $1 \frac{1}{11}$

PRACTICE 6 problems

1 Find $6 \times \frac{1}{2}$.

ANSWER _____

2 Find $5 \times \frac{2}{5}$.

ANSWER _____

3 Find $2 \times \frac{5}{8}$. Write the answer as a mixed number.

ANSWER _____

4 Find $6 \times \frac{5}{6}$.

ANSWER _____

5 Find $2 \times \frac{7}{10}$. Write the answer as a mixed number.

ANSWER _____

6 Find $8 \times \frac{1}{8}$.

ANSWER _____

APPLY IT Show your work

- 1** The art club uses $\frac{5}{8}$ yard of ribbon for each of 6 prize bookmarks. How many yards of ribbon does the club use? Write an equation and solve.

WORK SPACE

ANSWER _____

- 2** Each lap in a school fun run is $\frac{2}{5}$ mile. Leo runs 8 laps. How many miles does he run? Between what two whole numbers is his distance? Write an equation and solve.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A hiking app records $\frac{5}{6}$ mile for each walking loop. Priya walks 8 loops. How far does she walk? Is her distance closer to 6 miles or 7 miles? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $6 \times 1/2$.	3
2	Find $5 \times 2/5$.	2
3	Find $2 \times 5/8$. Write the answer as a mixed number.	1 1/4
4	Find $6 \times 5/6$.	5
5	Find $2 \times 7/10$. Write the answer as a mixed number.	1 2/5
6	Find $8 \times 1/8$.	1

PART 2 • APPLY IT

- 3 3/4 yards; $6 \times 5/8 = 30/8 = 3 3/4$** Multiply 6 groups of 5/8 yard: $6 \times 5/8 = 30/8$. Rename 30/8 as 3 3/4.
- 3 1/5 miles, between 3 and 4; $8 \times 2/5 = 16/5 = 3 1/5$** Multiply the length of one lap by 8: $8 \times 2/5 = 16/5$. Rename 16/5 as 3 1/5, which is between 3 and 4.

CHALLENGE

6 2/3 miles, closer to 7 miles because 6 2/3 is 1/3 mile from 7 and 2/3 mile from 6.

Accept equivalent fractions and improper fractions when they are correct. For word problems, accept equations written with the factors in either order.