LESSON MAKER PRO

Fraction Groups Quest

Multiply fractions by whole numbers with models and equations.

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 3/8 of a pound of roast beef..."

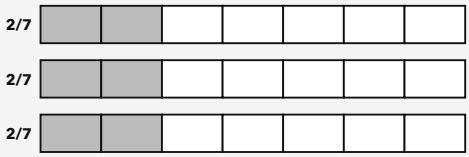
NAME _____ DATE _____

MULTIPLY EQUAL GROUPS

Multiply the whole number by the numerator, then keep the denominator. Simplify the fraction. If the numerator is at least the denominator, write a whole number or mixed number.

WORKED EXAMPLE

Find 3 × 2/7.

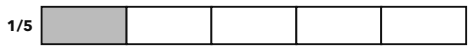


1. Start with 3 groups of 2/7.
2. Multiply the whole number and numerator: 3 × 2 = 6.
3. Keep the denominator: 6/7.

Answer: 6/7

PRACTICE 6 problems

1 The bar shows one group. Find 4 × 1/5.



ANSWER _____

2 Find 5 × 1/9.

ANSWER _____

3 Find 8 × 1/10. Write the answer in simplest form.

ANSWER _____

4 Find 9 × 1/4. Write the answer as a mixed number.

ANSWER _____

5 Find 10 × 1/8. Write the answer as a mixed number.

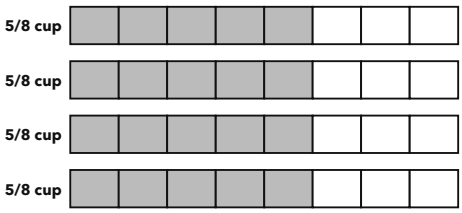
ANSWER _____

6 Find 5 × 5/8. Write the answer as a mixed number. Between which whole numbers does your answer lie?

ANSWER _____

APPLY IT Show your work

1 At a board-game club, each of 4 players gets 5/8 cup of trail mix. How many cups of trail mix are needed? Write an equation. Between which whole numbers does the amount lie?



ANSWER _____

2 A craft club makes 8 friendship bracelets. Each bracelet needs 5/8 meter of string. How many meters of string are needed?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A makers club has 5 bags of clay. Each bag weighs 4/9 pound. The club uses 1 1/9 pounds of clay. How many pounds of clay remain? Explain with equations.

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Groups Quest

GRADE 4 · 4.NF.B.4c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	The bar shows one group. Find 4 × 1/5.	**4/5**
2	Find 5 × 1/9.	**5/9**
3	Find 8 × 1/10. Write the answer in simplest form.	**4/5**
4	Find 9 × 1/4. Write the answer as a mixed number.	**2 1/4**
5	Find 10 × 1/8. Write the answer as a mixed number.	**1 1/4**
6	Find 5 × 5/8. Write the answer as a mixed number. Between which whole numbers does your answer lie?	**3 1/8; between 3 and 4**

PART 2 · APPLY IT

1. **4 × 5/8 = 20/8 = 2 1/2 cups; between 2 and 3** Multiply 4 by the numerator 5 and keep denominator 8. Convert 20/8 to 2 1/2.
2. **5 meters** Multiply 8 × 5/8. The 8 groups make 40/8, which equals 5.

CHALLENGE

5 × 4/9 = 20/9 = 2 2/9. Then 2 2/9 - 1 1/9 = 1 1/9, so 1 1/9 pounds remain.

Accept equivalent fractions when they have the correct value, but require simplest form or a mixed number when the item asks for it. For explanations, accept correct equations that show multiplication by the whole number and, in the challenge, the subtraction step.