LESSON MAKER PRO

Fraction Groups

Multiply fractions by counting equal groups.

GRADE 4 · 4.NOS.E.13.c

4.NOS.E.13.c "Use understanding of multiplication as equal groups to multiply a fraction by whole number (e.g., interpret b × c/d as b groups of c/d when c/d is greater than or less than 1)."

NAME _____ DATE _____

THE BIG IDEA

Multiplying a fraction by a whole number means adding that fraction once for each group. Multiply the numerator by the whole number, keep the denominator the same, and rename the answer as a mixed number when needed.

WORKED EXAMPLE

Find $5 \times 3/8$.

1. Write five equal groups: 3/8 + 3/8 + 3/8 + 3/8 + 3/8.
2. Add the eighths: 15/8.
3. Rename 15/8 as 1 7/8.

Answer: 1 7/8

PRACTICE 6 problems

1 Find 2 × 1/4.

ANSWER _____

2 Write 4 × 1/6 as repeated addition. Then find the total.

ANSWER _____

_____

3 Find 6 × 7/12. Write your answer as a mixed number.

ANSWER _____

4 Find 2 × 9/4.

ANSWER _____

5 How many sixths are in 4 groups of 7/6? Then write the total as a mixed number.

ANSWER _____

_____

6 Find 6 × 11/12.

ANSWER _____

APPLY IT Show your work

1 Each of 4 friends uses 9/10 meter of ribbon to decorate a team flag. How many meters of ribbon do they use altogether?

WORK SPACE

ANSWER _____

2 Each of 2 posters needs 7/4 meters of border tape. How many meters of tape are needed altogether?

WORK SPACE

ANSWER _____

CHALLENGE One step up

At a game club, each bag holds 9/4 cups of popcorn. Each of 2 tables fills 6 bags. How many cups of popcorn do they use altogether? Explain using equal groups.

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Groups

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 2 × 1/4.	**1/2**
2	Write 4 × 1/6 as repeated addition. Then find the total.	**1/6 + 1/6 + 1/6 + 1/6 = 2/3**
3	Find 6 × 7/12. Write your answer as a mixed number.	**3 1/2**
4	Find 2 × 9/4.	**4 1/2**
5	How many sixths are in 4 groups of 7/6? Then write the total as a mixed number.	**28 sixths; 4 2/3**
6	Find 6 × 11/12.	**5 1/2**

PART 2 · APPLY IT

1. **3 3/5 meters** Four groups of 9/10 meter make 36/10 meters, or 3 3/5 meters.
2. **3 1/2 meters** Two groups of 7/4 meters make 14/4 meters, or 3 1/2 meters.

CHALLENGE

The tables fill 12 bags, so there are 12 groups of 9/4 cups. That is 108/4, or 27 cups.

Accept equivalent fractions or mixed numbers unless a problem asks for a mixed number. In the challenge, accept any explanation that correctly shows 12 equal groups of 9/4 cups.