LESSON MAKER PRO

Fractions Within Fractions

Model a part of a part

GRADE 5 · 5.NF.B.12.b

5.NF.B.12.b "Use a visual fraction model (area model, set model, or linear model) to show (a/b) × (c/d) and create a story context for this equation to interpret the product."

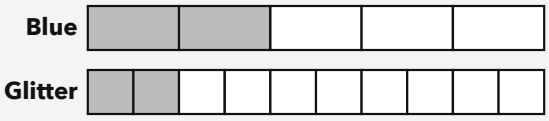
NAME _____ DATE _____

THE BIG IDEA

To find a fraction of a fraction, split each shaded part of a bar into smaller equal parts. Count the parts you need, then compare that count with all the small parts in the whole bar.

WORKED EXAMPLE

The top bar shows the blue part of a ribbon. Half of the blue part gets glitter. Use the bars to find what fraction of the whole ribbon has glitter.



1. The blue part is 2/5 of the ribbon.
2. Half of 2/5 is 1/2 × 2/5.
3. The glitter covers 2/10 of the whole ribbon.

Answer: 2/10 = 1/5 of the ribbon

PRACTICE 4 problems

1 Sketch an area model for 1/2 × 3/4. Find the product.

ANSWER _____

2 Sketch an area model for 2/3 × 1/4. Find the product.

ANSWER _____

3 Find 3/4 × 2/3. Write a one-sentence story that fits the equation.

ANSWER _____

4 Find 2/3 × 2/5. Write a one-sentence story that fits the equation.

ANSWER _____

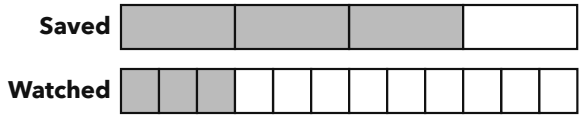
APPLY IT Show your work

1 The top bar shows the green part of a poster. Jun adds stars to 1/2 of the green part. Use the bars to find what fraction of the whole poster has stars. Write an equation.



ANSWER _____

2 The top bar shows the part of a video Imani saved. She watches 1/3 of the saved part. Use the bars to find what fraction of the whole video she watches. Write an equation.



ANSWER _____

CHALLENGE One step up

A comic page is 3/4 finished. You color 2/3 of the unfinished part. Sketch a model, write an equation, and find what fraction of the whole page you color.

WORK SPACE AND ANSWER

ANSWER KEY

Fractions Within Fractions

GRADE 5 · 5.NF.B.12.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Sketch an area model for 1/2 × 3/4. Find the product.	**3/8**
2	Sketch an area model for 2/3 × 1/4. Find the product.	**2/12 = 1/6**
3	Find 3/4 × 2/3. Write a one-sentence story that fits the equation.	**1/2. Lee walks 2/3 of a 3/4-mile trail, or 1/2 mile.**
4	Find 2/3 × 2/5. Write a one-sentence story that fits the equation.	**4/15. Sam eats 2/5 of a 2/3-pound bag of trail mix, or 4/15 pound.**

PART 2 · APPLY IT

1. **1/2 × 3/5 = 3/10 of the poster** The green part is 3/5 of the poster. Half of that part covers 3 of the 10 equal parts in the lower bar.
2. **1/3 × 3/4 = 3/12 = 1/4 of the video** The saved part is 3/4 of the video. One-third of that part is 3 of the 12 equal parts in the lower bar.

CHALLENGE

1/4 × 2/3 = 2/12 = 1/6 of the page

Accept equivalent fractions and models with the correct part of the whole shaded. Stories should make clear which fraction is taken of which amount.