LESSON MAKER PRO

Fraction Tile Areas

Multiply fractions to find rectangular areas

GRADE 5 · MT.5.NF.4

MT.5.NF.4 "Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction by: Expressing the product a/b × q as "a" parts of a partition of q into b equal parts, equivalently..."

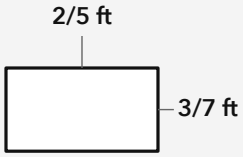
NAME _____ DATE _____

THE BIG IDEA

To find the area of a rectangle, multiply its side lengths. You can also split a unit square into equal rows and columns, then count the small squares the rectangle covers.

WORKED EXAMPLE

What is the area of the rectangle shown?

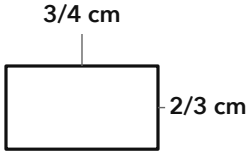


1. Split a square foot into 5 columns and 7 rows.
2. Each small square has an area of 1/35 square foot.
3. The rectangle covers 2 × 3 = 6 small squares.
4. Area = 6 × 1/35 = 6/35 square foot.

Answer: 6/35 square foot

PRACTICE 6 problems

1 Find the area of the rectangle shown.

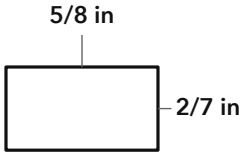


ANSWER _____

2 Multiply: 4/9 × 3/8 = ___

ANSWER _____

3 Find the area of the rectangle shown.



ANSWER _____

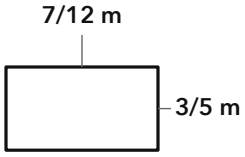
4 Find 3/5 of 20.

ANSWER _____

5 A rectangle is 7/10 meter long and 5/6 meter wide. Find its area.

ANSWER _____

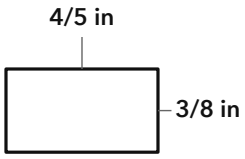
6 Find the area of the rectangle shown.



ANSWER _____

APPLY IT Show your work

1 You make the rectangular sticker shown for your laptop. What is its area?



ANSWER _____

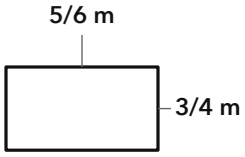
2 A game has 24 points available. You earn 5/8 of the points. How many points do you earn?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find the area of the rectangle shown. Explain how counting small squares in a unit square gives the same answer as multiplying the side lengths.



WORK SPACE AND ANSWER

ANSWER KEY

Fraction Tile Areas

GRADE 5 · MT.5.NF.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the rectangle shown.	**1/2 square centimeter**
2	Multiply: 4/9 × 3/8 = ___	**1/6**
3	Find the area of the rectangle shown.	**5/28 square inch**
4	Find 3/5 of 20.	**12**
5	A rectangle is 7/10 meter long and 5/6 meter wide. Find its area.	**7/12 square meter**
6	Find the area of the rectangle shown.	**7/20 square meter**

PART 2 · APPLY IT

1. **3/10 square inch** Multiply the side lengths: 4/5 × 3/8 = 12/40 = 3/10.
2. **15 points** Divide 24 into 8 equal groups of 3 points, then take 5 groups: 5 × 3 = 15.

CHALLENGE

The area is 5/8 square meter. Divide a square meter into 6 columns and 4 rows: the rectangle covers 5 × 3 = 15 of the 24 small squares, so its area is 15/24 = 5/8 square meter.

Accept equivalent fractions with correct area units. For the challenge, accept an explanation that identifies 15 of 24 equal squares or correctly multiplies 5/6 × 3/4.