

Grade 5 - Area of Rectangles with Fractional Sides - Worksheet

Common Core 5.NF.B.4b · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

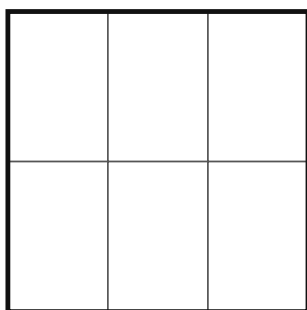
These 20 problems practice finding the area of rectangles with fractional side lengths, as described in standard 5.NF.B.4b. Early problems use unit squares cut into tiles. Later problems multiply fractions and mixed numbers directly.

The last six problems are word problems about frames, posters, rugs, bulletin boards, gardens, and decals. Write each area with square units.

Grade 5 · Common Core State Standards: **5.NF.B.4b**

Exercise 1 - Size of one tile

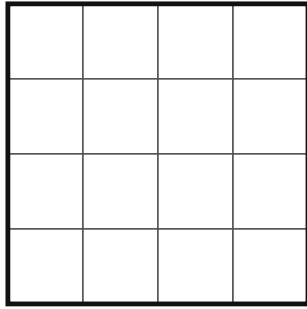
A unit square is cut into 3 equal columns and 2 equal rows. What fraction of the unit square is one tile?



A unit square cut into 6 tiles.

Exercise 2 - Fourths by fourths

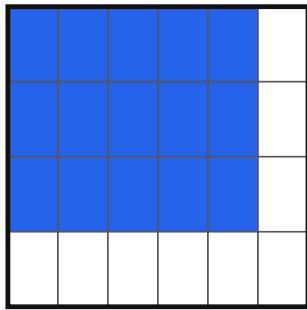
A unit square is cut into 4 equal columns and 4 equal rows. How many tiles are there? What is the area of one tile?



Sixteen equal tiles.

Exercise 3 - Count the tiles

The shaded rectangle is drawn on a unit square cut into tiles. Find its area.



The unit square has 6 columns and 4 rows.

Exercise 4 - Half by fifth

Find the area of a rectangle that is $\frac{1}{2}$ foot long and $\frac{1}{5}$ foot wide.

Exercise 5 - Thirds and sevenths

Find the area of a rectangle that is $\frac{2}{3}$ foot long and $\frac{3}{7}$ foot wide.

Exercise 6 - Rectangle in inches

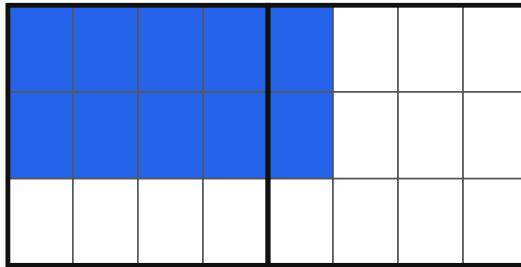
Find the area of a rectangle that is $\frac{3}{4}$ inch long and $\frac{5}{6}$ inch wide.

Exercise 7 - Yards that simplify

Find the area of a rectangle that is $\frac{4}{5}$ yard long and $\frac{5}{8}$ yard wide.

Exercise 8 - Tiles across two squares

A rectangle is $1\frac{1}{4}$ inches long and $\frac{2}{3}$ inch wide. The model uses two unit squares. Find the area.



Each unit square is cut into 4 columns and 3 rows.

Exercise 9 - Mixed number by fraction

Find the area of a rectangle that is $2\frac{1}{2}$ yards long and $\frac{3}{5}$ yard wide.

Exercise 10 - Two mixed numbers

Find the area of a rectangle that is $1\frac{3}{4}$ feet long and $1\frac{1}{3}$ feet wide.

Exercise 11 - Compare two areas

Rectangle A is $\frac{3}{4}$ foot by $\frac{4}{5}$ foot. Rectangle B is $\frac{2}{3}$ foot by $\frac{7}{8}$ foot. Which rectangle has the greater area?

Exercise 12 - Area of a square

A square tile has sides of length $\frac{2}{5}$ foot. Find its area.

Exercise 13 - Square with a mixed side

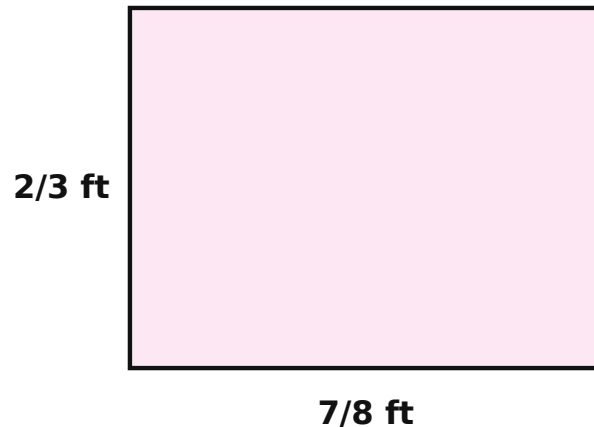
A square sticker has sides of length $1\frac{1}{2}$ inches. Find its area.

Exercise 14 - Area and perimeter

A rectangle is $\frac{3}{4}$ foot long and $\frac{1}{2}$ foot wide. Find its area and its perimeter.

Exercise 15 - Picture frame

Maya's picture frame is $\frac{7}{8}$ foot long and $\frac{2}{3}$ foot wide. What area of wall does the frame cover?



Maya's picture frame.

Exercise 16 - Poster paint

Jamal paints a rectangular poster that is $2\frac{1}{2}$ feet long and $1\frac{1}{2}$ feet wide. Paint costs \$4 for each square foot. What is the area of the poster, and what does the paint cost?

Exercise 17 - Rug for the den

Sofia buys a rug that is $2\frac{1}{3}$ yards long and $1\frac{1}{2}$ yards wide. Find the area of the rug.

Exercise 18 - Bulletin board

The school bulletin board is $4\frac{1}{2}$ feet long and $2\frac{2}{3}$ feet wide. Ethan covers $\frac{3}{4}$ of the board with blue paper. How many square feet are covered with blue paper?

Exercise 19 - Two garden beds

Priya plants two beds. Bed A is $\frac{3}{4}$ yard by $\frac{1}{2}$ yard. Bed B is $\frac{5}{6}$ yard by $\frac{3}{4}$ yard. What is the total area of the two beds?

Exercise 20 - Window decals

Diego makes window decals for the school store. Each decal is $1\frac{2}{3}$ feet long and $\frac{3}{4}$ foot wide. What is the area of one decal? What is the total area of 6 decals?