

Grade 5 · Multiplying Fractions · Worksheet

Common Core 5.NF.B.3, 5.NF.B.4, 5.NF.B.5, 5.NF.B.6 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

These 23 problems practice Common Core 5.NF.B.3 through 5.NF.B.6. Write fractions as division, multiply fractions and mixed numbers, and use area models and rectangles with fractional sides.

Start with the pictures, then move to equations. The last six problems are word problems with more than one step. Write every answer in simplest form.

Grade 5 Common Core: 5.NF.B.3 · 5.NF.B.4 · 5.NF.B.5 · 5.NF.B.6

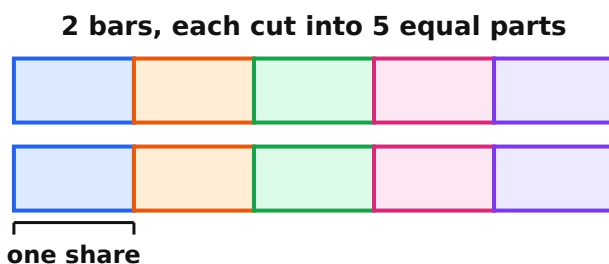
Problem 1: Division as a fraction

Write each division as a fraction. Use a mixed number when the fraction is greater than 1.

- a. $3 \div 5$
- b. $7 \div 8$
- c. $11 \div 3$

Problem 2: Sharing pizzas

Two pizzas are shared equally among 5 friends. How much pizza does each friend get?



Two pizzas cut into fifths.

Problem 3: Whole number times a unit fraction

Find $6 \times \frac{1}{4}$. Use the model.



6 pieces of $\frac{1}{4}$

Six pieces of $\frac{1}{4}$.

Problem 4: Fraction of a whole number

Find each product.

a. $\frac{3}{10} \times 10$

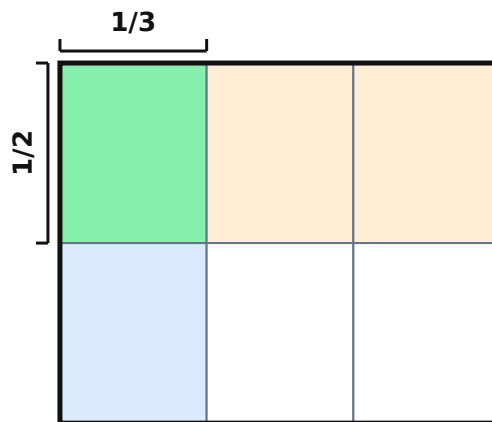
b. $\frac{10}{8} \times 24$

Problem 5: Whole number times a fraction

Find $4 \times \frac{3}{8}$. Write the answer as a mixed number.

Problem 6: Half of a third

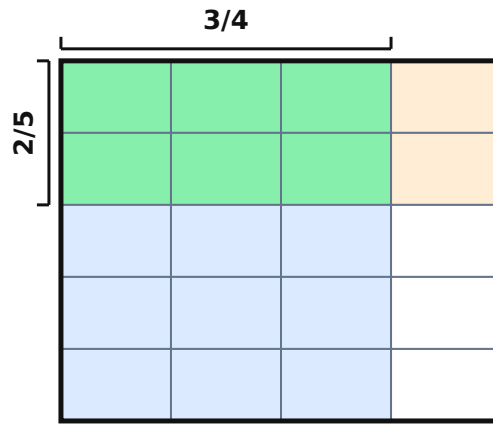
Find $\frac{1}{2} \times \frac{1}{3}$. The model shows the unit square cut into thirds across and halves down.



Shade one third and one half.

Problem 7: Area model product

Write the multiplication sentence the model shows and find the product.



Blue columns, orange rows, green overlap.

Problem 8: Multiplying two fractions

Multiply. Write each product in simplest form.

- $\frac{3}{10} \times \frac{2}{9}$
- $\frac{4}{15} \times \frac{3}{10}$
- $\frac{7}{10} \times \frac{4}{6}$

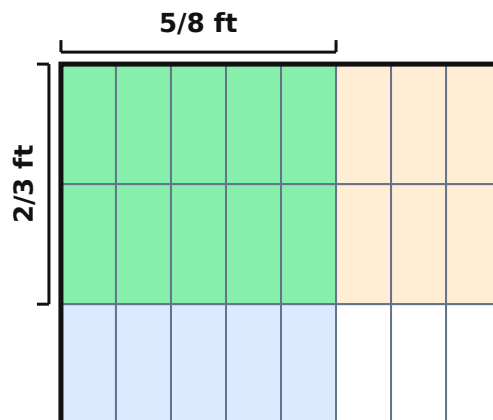
Problem 9: Simplify first

Cancel common factors before multiplying.

- $\frac{8}{9} \times \frac{3}{16}$
- $\frac{14}{15} \times \frac{5}{21}$

Problem 10: Area of a small rectangle

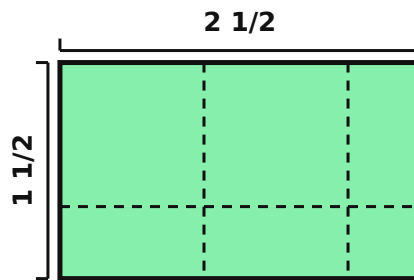
A rectangle is $\frac{5}{8}$ ft wide and $\frac{2}{3}$ ft tall. The square is 1 ft by 1 ft. Find the area of the rectangle.



A 1-foot square cut into 8 columns and 3 rows.

Problem 11: Tiling with mixed numbers

A rug is $2\frac{1}{2}$ yd long and $1\frac{1}{2}$ yd wide. Find its area. The dashed lines mark 1-yard squares.



A rug on 1-yard squares.

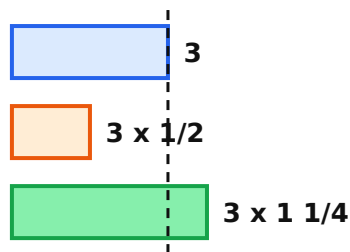
Problem 12: Greater, less, or equal

Compare using $<$, $>$, or $=$ without finding the products.

- a. $\frac{7}{8} \times 5$ $\underline{\hspace{1cm}}$ 5
- b. $4 \times 1\frac{1}{4}$ $\underline{\hspace{1cm}}$ 4
- c. $\frac{2}{3} \times \frac{3}{4}$ $\underline{\hspace{1cm}}$ $\frac{3}{4}$
- d. $1 \times \frac{9}{10}$ $\underline{\hspace{1cm}}$ $\frac{9}{10}$

Problem 13: Scaling bars

The bars show 3 and two scaled copies of 3. Find both products and tell which is greater than 3.



Bars for 3, $3 \times \frac{1}{2}$ and $3 \times 1\frac{1}{4}$.

Problem 14: Mixed number times whole number

Find each product.

- a. $2\frac{1}{4} \times 4$
- b. $3 \times 1\frac{2}{3}$

Problem 15: Mixed number times fraction

Find each product.

- a. $2\frac{1}{2} \times 1\frac{3}{5}$
- b. $\frac{3}{4} \times 2\frac{2}{3}$

Problem 16: Two mixed numbers

Find each product.

- a. $3\frac{1}{3} \times 1\frac{4}{5}$
- b. $2\frac{1}{4} \times 1\frac{1}{3}$

Problem 17: Missing factor

Find each missing factor.

- a. $\frac{5}{6} \times [\text{?}] [\text{?}] [\text{?}] = \frac{5}{12}$
- b. $\frac{3}{4} \times [\text{?}] [\text{?}] [\text{?}] = \frac{9}{8}$

Problem 18: Trail mix for hikers

Five pounds of trail mix are shared equally among 3 hikers. How many pounds does each hiker get? Write the answer as a mixed number.

Problem 19: Spending part of \$24

Sofia has \$24. She spends $\frac{3}{8}$ of it on a book. How much does the book cost?

Problem 20: Little League practice

Jamal practices for $1\frac{1}{2}$ hours each day for 5 days. How many hours does he practice in all?

Problem 21: Farmers market tomatoes

A stand has $3\frac{3}{4}$ pounds of tomatoes. Priya buys $\frac{2}{3}$ of them. How many pounds does she buy?

Problem 22: Garden plot

Diego's garden is $4\frac{1}{2}$ yards long and $2\frac{2}{3}$ yards wide. Find its area.

Problem 23: Brownie pan

Aisha has $\frac{3}{4}$ of a pan of brownies. She gives $\frac{2}{3}$ of that to her class. She eats half of what is left. What fraction of the whole pan does she eat?