

Dividing Fractions with Models and Reciprocals

Grade 6 math · Test · Standards: 6.NS.A.1

Name: _____ Date: _____ Class: _____

This test has 9 questions worth 20 points in total and fits a 45-minute period. Show all work, simplify every answer, and write mixed numbers where the problem uses them.

Standards: 6.NS.A.1 · **Level:** Grade 6

Time: 45 minutes · 9 questions · Total: 20 points · Calculator: as allowed by your teacher

Question 1 Reciprocals (2 points)

- Write the reciprocal of $\frac{5}{9}$. (1 point)
- Write the reciprocal of 4. (1 point)

Question 2 Using a Model (2 points)

The model shows 2 cups of juice split into thirds and grouped in pairs of thirds. Each group is $\frac{2}{3}$ cup. Use it to find $2 \div \frac{2}{3}$.



Six thirds in 2 cups.

Question 3 Dividing (2 points)

- Find $\frac{4}{5} \div \frac{2}{3}$. (1 point)
- Find $6 \div \frac{3}{4}$. (1 point)

Question 4 More Dividing (2 points)

- Find $\frac{3}{8} \div 3$. (1 point)
- Find $\frac{7}{10} \div \frac{7}{5}$. (1 point)

Question 5 Mixed Numbers (2 points)

- a. Find $3\frac{1}{3} \div \frac{5}{9}$. (1 point)
- b. Find $2\frac{1}{4} \div 1\frac{1}{8}$. (1 point)

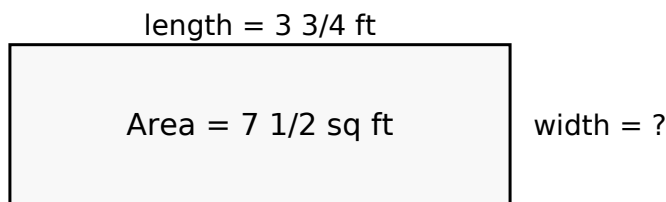
Question 6 Dough Rolls (3 points)

A baker has $6\frac{3}{4}$ pounds of dough and makes rolls of $\frac{3}{8}$ pound each.

- a. How many rolls can the baker make? (2 points)
- b. Each roll sells for \$0.75. How much do all the rolls bring in? (1 point)

Question 7 Missing Width (3 points)

A rectangular mat has area $7\frac{1}{2}$ square feet and length $3\frac{3}{4}$ feet. Find its width.



Area = length $\times$ width.

Question 8 Paint Sharing (3 points)

Four volunteers share $\frac{5}{6}$ of a gallon of paint equally.

- a. How much does each volunteer get? (2 points)
- b. How many cups of $\frac{1}{12}$ gallon can be filled from $\frac{5}{6}$ gallon? (1 point)

Question 9 Explain (1 point)

Without a calculator, find $5 \div \frac{1}{2}$ and say why it is greater than 5.