

Grade 6 · Dividing Fractions · Quiz

Common Core 6.NS.A.1 · mathovore.fr

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

This quiz has 10 multiple-choice questions on dividing fractions, reciprocals, mixed numbers, and word problems. Choose one answer for each question, then read the explanation to see the correct reasoning and the typical mistake.

Grade 6 Common Core: 6.NS.A.1

Questions

Question 1

What is $\frac{1}{2} \div \frac{1}{4}$?



Half of a bar split into fourths.

- A. $\frac{1}{8}$
- B. $\frac{1}{2}$
- C. 4
- D. 2

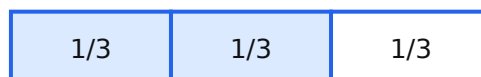
Question 2

What is $3 \div \frac{1}{2}$?

- A. 6
- B. $\frac{3}{2}$
- C. $\frac{1}{6}$
- D. 3

Question 3

What is $\frac{2}{3} \div 4$?



$\frac{2}{3}$ of a whole.

- A. $\frac{3}{100}$
- B. $\frac{6}{100}$
- C. $\frac{1}{100}$
- D. $\frac{1}{1000}$

Question 4

What is $\frac{3}{4} \div \frac{1}{8}$?

- A. $\frac{3}{32}$
- B. $\frac{6}{100}$
- C. $\frac{1}{100}$
- D. $\frac{1}{200}$

Question 5

What is the reciprocal of $\frac{3}{5}$?

- A. $\frac{3}{5}$
- B. $\frac{5}{3}$
- C. $\frac{5}{15}$
- D. $\frac{1}{15}$

Question 6

What is $1\frac{1}{2} \div \frac{3}{4}$?

- A. $1\frac{1}{8}$
- B. $\frac{1}{2}$
- C. 2
- D. $1\frac{1}{2}$

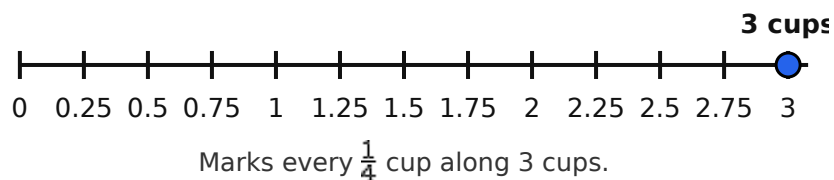
Question 7

What is $\frac{5}{6} \div \frac{2}{3}$?

- A. $\frac{5}{8}$
- B. $\frac{4}{5}$
- C. $\frac{5}{12}$
- D. $1\frac{1}{4}$

Question 8

A recipe uses $\frac{1}{4}$ cup of sugar for each batch of muffins. How many batches can be made with 3 cups of sugar?



- A. $\frac{3}{4}$ batch
- B. 7 batches
- C. $\frac{1}{12}$ batch
- D. 12 batches

Question 9

Jamal has $4\frac{1}{2}$ yards of ribbon. Each bow uses $\frac{3}{4}$ yard. How many bows can he make?

- A. 6 bows
- B. $3\frac{3}{8}$ bows
- C. $5\frac{1}{4}$ bows
- D. $\frac{1}{6}$ bow

Question 10

What is $\frac{3}{4} \div 3$?

- A. $\frac{9}{4}$
- B. $\frac{1}{4}$
- C. $\frac{4}{1}$
- D. $\frac{3}{4}$

Answer key

1. **D** - Two fourths fit in one half, so the answer is 2. Multiplying the fractions ($\frac{1}{8}$) is a common mistake.
2. **A** - There are 6 halves in 3 wholes, so $3 \times 2 = 6$. The value $\frac{3}{2}$ comes from multiplying by $\frac{1}{2}$ instead of dividing.
3. **C** - Dividing by 4 is multiplying by $\frac{1}{4}$: $\frac{2}{3} \times \frac{1}{4} = \frac{2}{12} = \frac{1}{6}$. The value 6 is 4 divided by $\frac{2}{3}$.
4. **B** - Multiply by the reciprocal: $\frac{3}{4} \times 8 = \frac{24}{4} = 6$. Multiplying across ($\frac{3}{32}$) forgets to flip the second fraction.
5. **C** - The reciprocal flips the numerator and denominator, and $\frac{3}{5} \times \frac{5}{3} = 1$. The choice $-\frac{3}{5}$ is the opposite, not the reciprocal.
6. **C** - Write $1\frac{1}{2}$ as $\frac{3}{2}$, then $\frac{3}{2} \times \frac{4}{3} = \frac{12}{6} = 2$. The value $1\frac{1}{8}$ comes from multiplying without flipping.
7. **D** - $\frac{5}{6} \times \frac{3}{2} = \frac{15}{12} = 1\frac{1}{4}$. The value $\frac{5}{9}$ comes from multiplying $\frac{5}{6}$ by $\frac{2}{3}$ without flipping.
8. **D** - Divide: $3 \div (\frac{1}{4}) = 3 \times 4 = 12$ batches. Multiplying 3 by $\frac{1}{4}$ gives $\frac{3}{4}$, which uses the wrong operation.
9. **A** - Divide: $\frac{9}{2} \times \frac{4}{3} = \frac{36}{6} = 6$ bows. Adding or multiplying the numbers does not answer how many groups fit.
10. **B** - Dividing by 3 is multiplying by $\frac{1}{3}$: $\frac{3}{4} \times \frac{1}{3} = \frac{3}{12} = \frac{1}{4}$. The answer $\frac{9}{4}$ comes from multiplying by 3.

Remember:

- Two numbers are reciprocals if their product is 1; flip a fraction to find its reciprocal.
- To divide by a fraction, multiply by its reciprocal.
- Rewrite mixed numbers as improper fractions before dividing.
- Dividing by a fraction less than 1 gives a larger quotient.
- Check a quotient by multiplying it by the divisor.