

Module 4 Operations With Fractions Quiz B Answers Answer Key PDF

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What is the reciprocal of $5/7$?

- A. $7/5$ ✓
- B. $5/7$
- C. $1/5$
- D. $1/7$

Which of the following are equivalent to the fraction $3/4$?

- A. $6/8$ ✓
- B. $9/12$ ✓
- C. $12/16$ ✓
- D. $15/20$

Explain the process of converting an improper fraction to a mixed number. Provide an example with your explanation.

To convert the improper fraction $7/4$ to a mixed number, divide 7 by 4, which equals 1 with a remainder of 3. Therefore, the mixed number is $1 \frac{3}{4}$.

What is the least common denominator of $1/4$ and $1/6$?

- A. 12 ✓
- B. 24
- C. 6
- D. 8

Which of the following operations require finding a common denominator?

- A. Adding fractions ✓
- B. Subtracting fractions ✓
- C. Multiplying fractions
- D. Dividing fractions

Describe how you would solve a word problem involving the division of fractions. Use an example to illustrate your explanation.

To solve a word problem involving the division of fractions, first convert the division into multiplication by taking the reciprocal of the second fraction. For example, if the problem is 'How many $\frac{1}{4}$ cups are in 2 cups?', you would calculate $2 \div (\frac{1}{4})$ which is the same as $2 \times (\frac{4}{1}) = 8$. Thus, there are 8 quarter cups in 2 cups.

What is the product of $\frac{2}{3}$ and $\frac{3}{4}$?

- A. $\frac{1}{2}$
- B. $\frac{1}{4}$
- C. 1
- D. $\frac{3}{8}$

Which of the following fractions are greater than $\frac{1}{2}$?

- A. $\frac{3}{5}$ ✓
- B. $\frac{2}{3}$ ✓
- C. $\frac{1}{3}$
- D. $\frac{5}{10}$

Explain the relationship between fractions and decimals. How would you convert a fraction to a decimal? Provide an example.

To convert a fraction to a decimal, divide the numerator by the denominator. For example, to convert the fraction $\frac{3}{4}$ to a decimal, you would calculate $3 \div 4$, which equals 0.75.

Which fraction is equivalent to 0.75?

- A. $\frac{3}{4}$ ✓
- B. $\frac{1}{2}$
- C. $\frac{2}{3}$

D. $\frac{5}{8}$

Which of the following are correct steps to convert $\frac{7}{4}$ into a mixed number?

- A. Divide 7 by 4 ✓
- B. The quotient is the whole number part ✓
- C. The remainder is the new numerator ✓
- D. Keep the original denominator ✓

Discuss the importance of simplifying fractions in mathematical operations. Provide examples to support your explanation.

For example, simplifying the fraction $\frac{8}{12}$ to $\frac{2}{3}$ before adding it to another fraction can make the addition process simpler and reduce the chance of errors.

What is the result of subtracting $\frac{5}{8}$ from $\frac{3}{4}$?

- A. $\frac{1}{8}$ ✓
- B. $\frac{1}{4}$
- C. $\frac{3}{8}$
- D. $\frac{1}{2}$

Which of the following are correct when dividing fractions?

- A. Multiply by the reciprocal of the divisor ✓
- B. Find a common denominator
- C. Invert the second fraction ✓
- D. Simplify the result ✓

How can you use a number line to compare fractions? Provide a detailed explanation with an example.

To compare fractions using a number line, first identify a common denominator if necessary, then mark each fraction on the line according to its value. For example, to compare $\frac{1}{4}$ and $\frac{3}{8}$, convert $\frac{1}{4}$ to $\frac{2}{8}$, and then place both fractions on the number line to see that $\frac{3}{8}$ is greater than $\frac{1}{4}$.

What is the decimal equivalent of $\frac{1}{5}$?

A. 0.2 ✓

B. 0.5

C. 0.25

D. 0.75

Which of the following fractions are in simplest form?

A. $\frac{4}{8}$

B. $\frac{3}{5}$ ✓

C. $\frac{10}{15}$

D. $\frac{7}{9}$ ✓

Describe a strategy for solving a complex fraction problem involving multiple operations. Use an example to illustrate your strategy.

To solve the complex fraction $(\frac{1}{2} + \frac{1}{3}) / (\frac{1}{4} - \frac{1}{6})$, first simplify the numerator: $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$. Then simplify the denominator: $\frac{1}{4} - \frac{1}{6} = \frac{3}{12} - \frac{2}{12} = \frac{1}{12}$. Now, divide the simplified numerator by the simplified denominator: $(\frac{5}{6}) \div (\frac{1}{12}) = (\frac{5}{6}) * (\frac{12}{1}) = 10$. The final answer is 10.

What is the sum of $\frac{1}{4}$ and $\frac{2}{5}$?

A. $\frac{9}{20}$

B. $\frac{7}{20}$

C. $\frac{13}{20}$ ✓

D. $\frac{3}{5}$

Which of the following are true about mixed numbers?

A. They can be converted to improper fractions ✓

B. They are always greater than 1

C. They consist of a whole number and a fraction ✓

D. They can be used in multiplication without conversion