

Grade 5 - Multiplying Fractions and Mixed Numbers - Quiz

Common Core 5.NF.B.4a, 5.NF.B.6 · maths-pdf.fr/en/

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

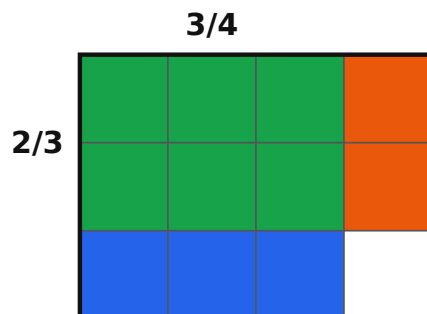
Answer these 10 multiple-choice questions about multiplying fractions and mixed numbers. Each question has one correct answer. Use scratch paper to multiply and simplify, then read the explanation after each answer.

Grade 5 · Common Core State Standards: **5.NF.B.4a, 5.NF.B.6**

Questions

Question 1

The model shows the product of two fractions. What is the product?



- A. $\frac{5}{7}$
- B. $\frac{1}{12}$
- C. $\frac{1}{2}$
- D. $\frac{3}{4}$

Question 2

Find $4 \times \frac{2}{3}$.

- A. $\frac{8}{12}$

- B. $2\frac{2}{3}$
- C. $4\frac{1}{3}$
- D. $\frac{2}{12}$

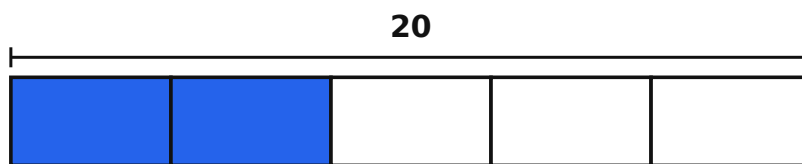
Question 3

Find $\frac{3}{5} \times \frac{5}{6}$.

- A. $\frac{1}{2}$
- B. $\frac{8}{11}$
- C. $\frac{11}{18}$
- D. $\frac{18}{5}$

Question 4

The tape diagram shows 20 cut into 5 equal parts with 2 parts shaded. What is $\frac{2}{5}$ of 20?



Twenty cut into 5 equal parts, 2 parts shaded.

- A. 50
- B. 4
- C. 12
- D. 8

Question 5

Find $1\frac{1}{2} \times 2$.

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

Question 6

Find $2\frac{1}{3} \times 1\frac{1}{2}$.

- A. $2\frac{1}{6}$

- B. $3\frac{5}{6}$
- C. $4\frac{1}{2}$
- D. $3\frac{1}{2}$

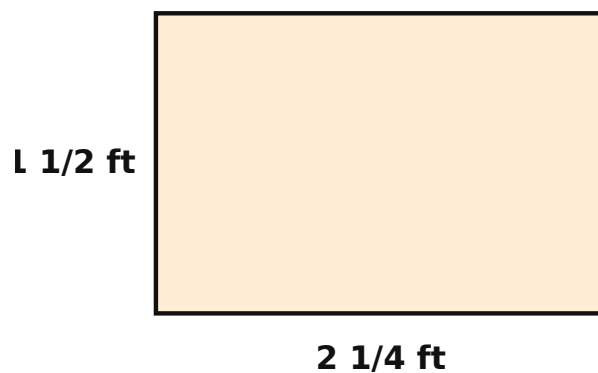
Question 7

A recipe needs $\frac{3}{4}$ cup of milk. Maya makes $\frac{2}{3}$ of the recipe. How much milk does she use?

- A. $\frac{1}{2}$ cup
- B. $\frac{1}{12}$ cup
- C. $\frac{17}{12}$ cup
- D. $\frac{5}{12}$ cup

Question 8

What is the area of this rectangle?



2 1/4 ft

A rectangle.

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

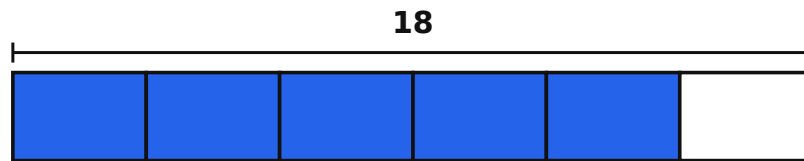
Question 9

Which number is the same as $\frac{3}{4}$ of 12?

- A. 16
- B. 9
- C. 3
- D. 15

Question 10

Ethan has 18 stickers. The tape diagram shows 5 of the 6 equal groups shaded as space stickers. How many space stickers does he have?



Eighteen stickers in 6 equal groups, 5 groups shaded.

- A. 15
- B. 3
- C. 12
- D. 90

Answers

1. **C** - The overlap has 6 of 12 squares: $6/12 = 1/2$. Adding the fractions would give a number greater than 1, not $5/7$.
2. **B** - Write 4 as $4/1$: $8/3 = 2 \frac{2}{3}$. A common mistake is to multiply the denominator by 4 as well.
3. **A** - $3 \times 5 = 15$ and $5 \times 6 = 30$, so the product is $15/30 = 1/2$. Adding numerators and denominators gives $8/11$, which is wrong.
4. **D** - Each part is $20 / 5 = 4$. Two parts make 8. Saying 50 comes from multiplying 20 by $5/2$, which is the wrong direction.
5. **B** - $3/2 \times 2 = 6/2 = 3$. Multiplying only the whole part gives $2 \frac{1}{2}$.
6. **D** - $7/3 \times 3/2 = 21/6 = 3 \frac{1}{2}$. Multiplying wholes and fractions separately gives $2 \frac{1}{6}$, which is wrong.
7. **A** - $3/4 \times 2/3 = 6/12 = 1/2$. Adding the fractions gives $17/12$, and subtracting gives $1/12$.
8. **C** - $9/4 \times 3/2 = 27/8 = 3 \frac{3}{8}$. Adding the sides gives $3 \frac{3}{4}$, which is not the area.
9. **B** - $12 / 4 = 3$, and $3 \times 3 = 9$. Dividing 12 by $3/4$ gives 16, which is the wrong operation.
10. **A** - Each group has $18 / 6 = 3$ stickers. Five groups make 15.

Remember

- A fraction of a number means fraction times that number.
- Fraction times fraction: multiply numerators, multiply denominators, then simplify.
- Write a whole number as a fraction over 1 before multiplying.
- Change mixed numbers to improper fractions, multiply, then write the answer as a mixed number.
- An area model shows the product as the overlap of shaded parts.