



SKILL 12: Multiplying Mixed Numbers

To multiply two mixed numbers, first write each mixed number as an improper fraction. Then multiply the two improper fractions. Be sure to write the product in simplest form.

Example 1

Multiply: $1\frac{1}{2} \times 3\frac{1}{2}$.

Write each mixed number as an improper fraction.

$$1\frac{1}{2} \times 3\frac{1}{2} = \frac{3}{2} \times \frac{7}{2}$$

Multiply the numerators.
Then multiply the denominators.

$$= \frac{3 \times 7}{2 \times 2}$$

Multiply and simplify.

$$= \frac{21}{4} = 5\frac{1}{4}$$

So, $1\frac{1}{2} \times 3\frac{1}{2} = 5\frac{1}{4}$.

Example 2

Multiply: $4 \times 1\frac{3}{5}$.

Write each factor as an improper fraction.

$$4 \times 1\frac{3}{5} = \frac{4}{1} \times \frac{8}{5}$$

Multiply the numerators.
Then multiply the denominators.

$$= \frac{4 \times 8}{1 \times 5}$$

Multiply and simplify.

$$= \frac{32}{5} = 6\frac{2}{5}$$

So, $4 \times 1\frac{3}{5} = 6\frac{2}{5}$.

Guided Practice

1. Multiply: $\frac{7}{8} \times 1\frac{1}{4}$.

a. Write the mixed number as an improper fraction.

$$1\frac{1}{4} = \frac{\square}{\square}$$

b. Multiply numerators and denominators.

$$\frac{\square}{\square} \times \frac{\square}{\square} = \frac{\square}{\square}$$

c. Simplify. _____.

2. Multiply: $1\frac{3}{4} \times 2\frac{1}{2}$.

a. Write each mixed number as an improper fraction.

$$1\frac{3}{4} = \frac{\square}{\square}; \quad 2\frac{1}{2} = \frac{\square}{\square}$$

b. Multiply and simplify.

$$\frac{\square}{\square} \times \frac{\square}{\square} = \frac{\square}{\square} = \underline{\hspace{2cm}}$$

SKILL 12: Practice**Multiply. Simplify each product.**

1. $3\frac{3}{4} \times 2\frac{1}{2} =$ _____

2. $1\frac{3}{8} \times 2\frac{1}{4} =$ _____

3. $5 \times 2\frac{1}{8} =$ _____

4. $3\frac{2}{3} \times 1\frac{1}{2} =$ _____

5. $\frac{1}{3} \times 2\frac{5}{6} =$ _____

6. $2\frac{1}{5} \times 1\frac{5}{6} =$ _____

7. $3\frac{1}{4} \times 2\frac{2}{3} =$ _____

8. $2 \times 1\frac{3}{10} =$ _____

9. $1\frac{2}{5} \times 3\frac{1}{3} =$ _____

10. $1\frac{1}{6} \times 3\frac{1}{5} =$ _____

11. $4 \times 3\frac{1}{3} =$ _____

12. $6\frac{1}{2} \times 1\frac{3}{5} =$ _____

13. $4\frac{1}{2} \times 1\frac{1}{4} =$ _____

14. $1\frac{3}{4} \times 5 =$ _____

15. $1\frac{1}{8} \times 2\frac{1}{6} =$ _____

16. $3 \times 3\frac{1}{6} =$ _____

17. $1\frac{1}{4} \times 5\frac{1}{3} =$ _____

18. $2\frac{2}{5} \times 1\frac{1}{2} =$ _____

19. $4\frac{2}{3} \times 1\frac{1}{8} =$ _____

20. $3\frac{3}{4} \times 4\frac{1}{5} =$ _____

21. $\frac{2}{3} \times 2\frac{1}{2} =$ _____

22. $2\frac{1}{4} \times 5\frac{2}{3} =$ _____

23. $2\frac{2}{3} \times 6\frac{1}{2} =$ _____

24. $1\frac{1}{8} \times 6 =$ _____

Solve.

25. A certain granola cereal has 240 calories in each 1 cup serving. How many calories are in a serving of $1\frac{1}{3}$ cups of the cereal?

26. Samantha earns \$18 per hour. How much will she earn if she works for $12\frac{3}{4}$ hours?



27. Find the product: $2\frac{1}{2} \times 3\frac{1}{5}$.

A $2\frac{1}{10}$

C $6\frac{1}{10}$

B $6\frac{1}{7}$

D 8

Skill 12

28. Which is the best estimate of $1\frac{3}{10} \times 5\frac{1}{9}$?

F 0

H 10

G 5

J 12

Skill 9