

Fractions — Multiply & Divide

Fractions, Decimals & % · Grade 5

Score: _____ / 15

★ Hard · 15 Questions

Solve each problem. Show your work in the space provided. Write your answer on the line.

1. $1 \frac{1}{2} \times \frac{2}{3} = \underline{\hspace{2cm}}$

Answer: _____

2. $2 \frac{1}{4} \times 1 \frac{1}{3} = \underline{\hspace{2cm}}$

Answer: _____

3. $3 \frac{1}{3} \times 1 \frac{1}{5} = \underline{\hspace{2cm}}$

Answer: _____

4. $2 \frac{2}{3} \times 1 \frac{1}{2} = \underline{\hspace{2cm}}$

Answer: _____

5. A room is $4 \frac{1}{2}$ m long and $2 \frac{2}{3}$ m wide.
Find the area.

Answer: _____

6. $1 \frac{3}{4} \times 2 \frac{2}{5} = \underline{\hspace{2cm}}$

Answer: _____

7. $3 \frac{1}{2} \times 2 \frac{4}{7} = \underline{\hspace{2cm}}$

Answer: _____

8. Find $\frac{2}{3}$ of $1 \frac{1}{2}$ of 24.

Answer: _____

9. Find $\frac{3}{4}$ of $\frac{2}{3}$ of 48.

Answer: _____

10. A rectangle is $2\frac{1}{3}$ m $\times$ $3\frac{3}{4}$ m. Find its area.

Answer: _____

11. How many $\frac{2}{3}$ -cup servings are in 4 cups?

(Hint: divide — $4 \div \frac{2}{3}$)

Answer: _____

- 12.** Jake runs $3\frac{1}{2}$ km per day for $4\frac{2}{3}$ days.

How far does he run in total?

Answer: _____

- 13.** Multiply and simplify: $\frac{5}{6} \times \frac{3}{4} \times \frac{8}{15}$

Answer: _____

- 14.** A farmer uses $\frac{2}{5}$ of his land for wheat and $\frac{3}{4}$ of the wheat land for winter wheat.

If the farm is 120 acres, how many acres are winter wheat?

Answer: _____

- 15.** Simplify before multiplying: $14/15 \times 25/21$

Answer: _____

Answer Key

Fractions — Multiply & Divide — Hard

1. **1**

Convert: $1 \frac{1}{2} = \frac{3}{2}$. Multiply: $\frac{3}{2} \times \frac{2}{3} = \frac{6}{6} = 1$.

2. **3**

Convert: $\frac{9}{4} \times \frac{4}{3}$. Cancel 4s: $\frac{9}{1} \times \frac{1}{3} = \frac{9}{3} = 3$.

3. **4**

Convert: $\frac{10}{3} \times \frac{6}{5}$. Cancel: 10 and 5 $\rightarrow$ 2, 6 and 3 $\rightarrow$ 2. $2 \times 2 = 4$.

4. **4**

Convert: $\frac{8}{3} \times \frac{3}{2}$. Cancel 3s: $\frac{8}{1} \times \frac{1}{2} = \frac{8}{2} = 4$.

5. **12 m²**

$\frac{9}{2} \times \frac{8}{3}$. Cancel: 9 and 3 $\rightarrow$ 3, 8 and 2 $\rightarrow$ 4. $3 \times 4 = 12 \text{ m}^2$.

6. **4 $\frac{1}{5}$**

$\frac{7}{4} \times \frac{12}{5} = \frac{84}{20} = \frac{21}{5} = 4 \frac{1}{5}$.

7. **9**

$\frac{7}{2} \times \frac{18}{7}$. Cancel 7s: $\frac{1}{2} \times 18 = 9$.

8. **24**

Work left to right. First: $1 \frac{1}{2} \times 24 = \frac{3}{2} \times 24 = 36$. Then: $\frac{2}{3} \times 36 = 24$.

9. **24**

First: $\frac{2}{3}$ of 48 = 32. Then: $\frac{3}{4}$ of 32 = 24.

10. **8 $\frac{3}{4}$ m²**

$\frac{7}{3} \times \frac{15}{4} = \frac{105}{12} = \frac{35}{4} = 8 \frac{3}{4} \text{ m}^2$.

11. 6 servings

$$4 \div \frac{2}{3} = 4 \times \frac{3}{2} = \frac{12}{2} = 6.$$

12. 16 $\frac{1}{3}$ km

$$\frac{7}{2} \times \frac{14}{3} = \frac{98}{6} = \frac{49}{3} = 16 \frac{1}{3} \text{ km.}$$

13. $\frac{1}{3}$

$$\text{Cancel: } 5 \text{ and } 15 \rightarrow 1, 3. \text{ } 3 \text{ and } 6 \rightarrow 1, 2. \text{ } 8 \text{ and } 4 \rightarrow 2, 1. \text{ Result: } \frac{1 \times 1 \times 2}{2 \times 1 \times 3} = \frac{2}{6} = \frac{1}{3}.$$

14. 36 acres

$$\text{Wheat: } \frac{2}{5} \times 120 = 48 \text{ acres. Winter wheat: } \frac{3}{4} \times 48 = 36 \text{ acres.}$$

15. $\frac{10}{9} = 1 \frac{1}{9}$

$$\text{Cancel } 14 \text{ and } 21 (\div 7): 2 \text{ and } 3. \text{ Cancel } 25 \text{ and } 15 (\div 5): 5 \text{ and } 3. \frac{2 \times 5}{3 \times 3} = \frac{10}{9} = 1 \frac{1}{9}.$$
