5th Grade

FRACTIONS

Dividing Fractions

$$\frac{a}{b} \div \frac{c}{d}$$
 or $\frac{\frac{a}{b}}{c} = \frac{a}{b} \times \frac{d}{c} = \frac{au}{bc}$

Multiplying Fractions
$$\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d} = \frac{ac}{bd}$$

Workbook 1

Area Model

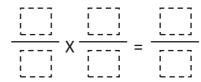
Use the illustration to write the multiplication sentence (Reducing not required).

Example:

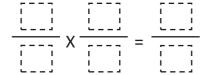


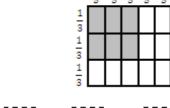
This is a square with side length 1 unit. Each cell has dimension $\frac{1}{2} \times \frac{1}{4}$. Shaded region forms a rectangle with length $3*\frac{1}{4}=\frac{3}{4}$ and width $\frac{1}{2}$. Multiplication sentence to represent the shaded region is $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$

1	1/2	1/2
3		
3		
1 3		
3		

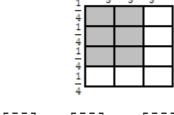


	1/3	1/3	1/3
3			
3			
3			

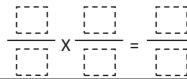


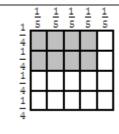




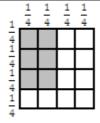


	6	6	6	6	6	6
1						
1 3						
3						
1 3						
3						





$$\frac{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}} \times \frac{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}} = \frac{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}$$



$$\frac{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}} \times \frac{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}} = \frac{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}{\begin{bmatrix} \vdots \\ \vdots \end{bmatrix}}$$

Calculate the Value

1. What is $\frac{1}{3}$ of 12?

2. What is $\frac{2}{5}$ of 20?

3. What is $\frac{4}{7}$ of 28?

4. What is $\frac{3}{4}$ of 16?

5. What is $\frac{8}{9}$ of 9?

6. What is $\frac{2}{3}$ of 18?

7. What is $\frac{2}{7}$ of 2?

8. What is $\frac{1}{8}$ of 6?

9. What is $\frac{5}{6}$ of 16?

10. What is $\frac{4}{9}$ of 27?

11. What is $\frac{1}{11}$ of 44?

12.What is $\frac{3}{5}$ of 20?

13. What is $\frac{2}{3}$ of 1?

14. What is $\frac{1}{4}$ of 22?

15. What is $\frac{7}{9}$ of 63?

16.What is $\frac{9}{10}$ of 5?

17. What is $\frac{1}{3}$ of 45?

18. What is $\frac{3}{8}$ of 2?

19. What is $\frac{1}{2}$ of 0?

20. What is $\frac{4}{5}$ of 35?

21. What is $\frac{5}{7}$ of 4?

22. What is $\frac{1}{6}$ of 36?

23. What is $\frac{2}{3}$ of 10?

24. What is $\frac{7}{8}$ of 8?

25. What is $\frac{2}{9}$ of 6?

26. What is $\frac{4}{11}$ of 4?

27. What is $\frac{1}{4}$ of 25?

28. What is $\frac{3}{7}$ of 14?

29. What is $\frac{9}{10}$ of 50?

30. What is $\frac{1}{2}$ of 15?

Multiplying Fractions

$$\frac{2}{5} \times \frac{5}{4} =$$

$$\frac{7}{8} \times \frac{6}{3} =$$

$$\frac{10}{5} \times \frac{1}{2} =$$

$$\frac{9}{7} \times \frac{2}{6} =$$

$$\frac{10}{9} \times \frac{3}{5} = \frac{5}{6} \times \frac{10}{9} =$$

$$\frac{5}{6} \times \frac{10}{9} =$$

$$\frac{12}{8} \times \frac{1}{6} = \boxed{\qquad \qquad \frac{1}{6} \times \frac{4}{3} = \boxed{\qquad }}$$

$$\frac{1}{6} \times \frac{4}{3} =$$

$$\frac{2}{3} \times \frac{4}{2} =$$

$$\frac{10}{7} \times \frac{7}{11} = \frac{6}{9} \times \frac{9}{3} = \frac{10}{8} \times \frac{3}{5} =$$

$$\frac{6}{9} \times \frac{9}{3} =$$

$$\frac{10}{8} \times \frac{3}{5} =$$

$$\frac{7}{6} \times \frac{1}{3} =$$

$$\frac{3}{4} \times \frac{6}{3} = \frac{9}{10} \times \frac{15}{7} =$$

$$\frac{9}{10} \times \frac{15}{7} =$$

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Dividing Fractions

$$\frac{2}{3} \div 4 =$$

$$\frac{6}{9} \div 3 =$$

$$5 \div \frac{1}{6} =$$

$$7 \div \frac{7}{9} = \frac{9}{11} \div 36 =$$

$$\frac{9}{11} \div 36 =$$

$$12 \div \frac{4}{5} =$$

$$14 \div \frac{7}{8} =$$

$$\frac{2}{3} \div 8 =$$

$$6 \div \frac{1}{2} = \boxed{}$$

$$1 \div \frac{11}{12} =$$

$$\frac{10}{13} \div 5 =$$

$$\frac{7}{9} \div 14 =$$

$$\frac{5}{8} \div 4 =$$

$$18 \div \frac{8}{9} =$$

$$6 \div \frac{4}{5} = \boxed{}$$

Dividing Fractions

$$\frac{8}{7} \div 4 =$$

$$3 \div \frac{6}{5} =$$

$$\frac{12}{7} \div 7 =$$

$$5 \div \frac{10}{6} =$$

$$16 \div \frac{12}{9} =$$

$$\frac{8}{2} \div 14 =$$

$$\frac{10}{5} \div 2 =$$

$$1 \div \frac{7}{6} = \boxed{}$$

$$3 \div \frac{2}{5} =$$

$$11 \div \frac{4}{3} =$$

$$\frac{7}{5} \div 5 =$$

$$\frac{9}{2} \div 6 =$$

$$\frac{9}{7} \div 1 =$$

$$4 \div \frac{6}{2} = \boxed{\qquad \qquad \frac{8}{5} \div 4} = \boxed{\qquad }$$

$$\frac{8}{5} \div 4 = \boxed{}$$

Dividing Fractions

$$5\frac{1}{3} \div 8 =$$

$$2 \div 3\frac{1}{2} =$$

$$9 \div 5\frac{1}{4} =$$

$$6\frac{4}{9} \div 18 =$$

$$4 \div 1\frac{7}{8} = \boxed{}$$

$$7\frac{3}{7} \div 9 =$$

$$10 \div 8\frac{1}{2} =$$

$$3\frac{3}{5} \div 2 = \boxed{}$$

$$12\frac{4}{5} \div 1 =$$

$$4\frac{6}{7} \div 2 =$$

$$5 \div 7\frac{1}{2} = \boxed{}$$

$$9\frac{3}{4} \div 26 =$$

$$3\frac{6}{7} \div 6 =$$

$$8 \div 1\frac{1}{5} =$$

$$2\frac{4}{5} \div 10 =$$