MULTIPLYING FRACTIONS - A

ANSWERS - PAGE 1

HELPFUL EXAMPLES

A. $\dfrac{1}{4} \times 12 = 12 \div 4 = 3$

| IF THE NUMERATOR (TOP NUMBER) IS ONE YOU CAN DIVIDE THE WHOLE NUMBER (12) BY THE DENOMINATOR (BOTTOM NUMBER). |

B. $\dfrac{3}{5} \times \dfrac{3}{4} = \dfrac{3}{5} \times \dfrac{3}{4} = \dfrac{9}{20}$

| A SIMPLE WAY TO MULTIPLY FRACTIONS IS TO MULTIPLY STRAIGHT ACROSS. MULTIPLY THE TWO NUMERATORS AND DENOMINATORS. |

C. $\dfrac{2}{9} \times 18 = \dfrac{2}{9} \times \dfrac{18}{1} = \dfrac{36}{9}$

| BEFORE MULTIPLYING STRAIGHT ACROSS YOU NEED TO CHANGE THE 18 INTO A FRACTION. DO YOU SEE HOW WE PUT THE 18 OVER 1? $18 = \frac{18}{1}$. |

| ON THIS PROBLEM, YOU END UP WITH AN IMPROPER FRACTION. IT NEEDS TO BE SIMPLIFIED. |

$\dfrac{36}{9} \div \dfrac{9}{9} = \dfrac{4}{1} = 4$

NOW YOUR TURN. USE THE EXAMPLES ABOVE TO HELP SOLVE THESE PROBLEMS.
DON'T FORGET TO SIMPLIFY.

1. $\dfrac{3}{5} \times \dfrac{2}{3} = \dfrac{2}{5}$

2. $\dfrac{1}{2} \times \dfrac{7}{8} = \dfrac{7}{16}$

3. $\dfrac{2}{3} \times \dfrac{1}{4} = \dfrac{1}{6}$

4. $15 \times \dfrac{1}{3} = 5$

5. $\dfrac{2}{5} \times \dfrac{4}{5} = \dfrac{8}{25}$

6. $\dfrac{2}{3} \times 6 = 4$

7. $\dfrac{2}{15} \times \dfrac{1}{2} = \dfrac{1}{15}$

8. $16 \times \dfrac{2}{9} = 3\dfrac{5}{9}$

9. $\dfrac{2}{3} \times \dfrac{3}{4} = \dfrac{1}{2}$

10. $\dfrac{5}{7} \times \dfrac{6}{12} = \dfrac{5}{14}$

11. $48 \times \dfrac{1}{8} = 6$

12. $\dfrac{7}{12} \times 4 = 2\dfrac{1}{3}$

13. $\dfrac{1}{9} \times \dfrac{2}{7} = \dfrac{2}{63}$

14. $\dfrac{8}{11} \times \dfrac{3}{4} = \dfrac{6}{11}$

15. $\dfrac{5}{8} \times \dfrac{4}{9} = \dfrac{5}{18}$

16. $\dfrac{3}{14} \times 7 = 1\dfrac{1}{2}$

17. $\dfrac{1}{4} \times \dfrac{6}{13} = \dfrac{3}{26}$

18. $\dfrac{5}{6} \times \dfrac{3}{10} = \dfrac{1}{4}$

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MULTIPLYING FRACTIONS - B

ANSWERS - PAGE 2

MORE HELPFUL EXAMPLES

D. $\dfrac{3}{10} \times \dfrac{5}{6} = \dfrac{15 \div 15}{60 \div 15} = \dfrac{1}{4}$

| BELOW IS THE SAME PROBLEM, BUT DONE A SLIGHTLY DIFFERENT WAY. |

| AS LONG AS YOU DO THE SAME TO THE TOP AND BOTTOM YOU CAN SIMPLIFY BEFORE MULTIPLYING. |

E. $\dfrac{3}{10} \times \dfrac{5}{6} = \dfrac{3^{\div 3} \times 5}{10 \times 6^{\div 3}} = \dfrac{1 \times 5^{\div 5}}{10 \times 2^{\div 5}} = \dfrac{1 \times 1}{2 \times 2} = \dfrac{1}{4}$

| DIVIDE NUMERATOR AND DENOMINATOR BY 3. | DIVIDE NUMERATOR AND DENOMINATOR BY 5. |

| BY SIMPLIFYING EARLY IT SAVES YOU A LOT OF TIME AND EFFORT. |

MULTIPLY. WRITE IN SIMPLEST FORM.

1. $\dfrac{9^{\div 9}}{20_{\div 5}} \times \dfrac{5^{\div 5}}{9_{\div 9}} = \dfrac{1}{4}$

2. $\dfrac{3}{11} \times \dfrac{11}{13} = \dfrac{3}{13}$

3. $\dfrac{1}{21} \times \dfrac{3}{4} = \dfrac{1}{28}$

4. $\dfrac{1}{3} \times \dfrac{5}{6} = \dfrac{5}{18}$

5. $10 \times \dfrac{4}{18} = 2\dfrac{2}{9}$

6. $\dfrac{6}{7} \times \dfrac{2}{3} = \dfrac{4}{7}$

7. $30 \times \dfrac{1}{5} = 6$

8. $\dfrac{4}{12} \times \dfrac{3}{13} = \dfrac{1}{13}$

9. $\dfrac{2}{5} \times \dfrac{15}{22} = \dfrac{3}{11}$

10. $\dfrac{3}{9} \times \dfrac{5}{10} = \dfrac{1}{6}$

11. $\dfrac{2}{3} \times 7 = 4\dfrac{2}{3}$

12. $\dfrac{4}{7} \times \dfrac{6}{16} = \dfrac{3}{14}$

13. $\dfrac{4}{11} \times \dfrac{44}{50} = \dfrac{8}{25}$

14. $\dfrac{2}{3} \times \dfrac{12}{15} = \dfrac{8}{15}$

15. $\dfrac{5}{9} \times \dfrac{9}{14} = \dfrac{5}{14}$

16. $\dfrac{5}{14} \times 8 = 2\dfrac{6}{7}$

17. $26 \times \dfrac{3}{4} = 39\dfrac{1}{2}$

18. $\dfrac{8}{16} \times \dfrac{11}{13} = \dfrac{11}{26}$

19. $\dfrac{3}{5} \times \dfrac{10}{18} = \dfrac{1}{3}$

20. $\dfrac{4}{7} \times \dfrac{7}{15} = \dfrac{4}{15}$

21. $\dfrac{8}{13} \times \dfrac{17}{24} = \dfrac{17}{39}$

LEVEL 1