MULTIPLYING FRACTIONS   *ANSWERS*

HELPFUL EXAMPLES

A. $\dfrac{1}{4}$ x 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. $\dfrac{3}{5}$ x $\dfrac{3}{4}$ = $\dfrac{3}{5}$ x $\dfrac{3}{4}$ = $\dfrac{9}{20}$

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

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

> 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.

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

NOW YOUR TURN. USE THE EXAMPLES ABOVE TO HELP SOLVE THESE PROBLEMS.

DON'T FORGET TO SIMPLIFY.

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

2. $\dfrac{1}{2}$ x $\dfrac{3}{4}$ = $\dfrac{3}{8}$

3. 8 x $\dfrac{2}{3}$ = $5\dfrac{1}{3}$

4. $\dfrac{2}{5}$ x $\dfrac{1}{4}$ = $\dfrac{1}{10}$

5. 12 x $\dfrac{1}{6}$ = 2

6. $\dfrac{3}{4}$ x $\dfrac{1}{3}$ = $\dfrac{1}{4}$

7. $\dfrac{3}{7}$ x 5 = $2\dfrac{1}{7}$

8. $\dfrac{2}{3}$ x $\dfrac{1}{5}$ = $\dfrac{2}{15}$

9. $\dfrac{2}{5}$ x $\dfrac{1}{2}$ = $\dfrac{1}{5}$

10. 14 x $\dfrac{3}{8}$ = $5\dfrac{1}{4}$

11. $\dfrac{4}{7}$ x $\dfrac{5}{8}$ = $\dfrac{5}{14}$

12. $\dfrac{1}{3}$ x 21 = 7

ANOTHER EXAMPLE

> DID YOU KNOW YOU CAN SIMPLIFY BEFORE MULTIPLYING?

D. $\dfrac{2}{5}$ x $\dfrac{5}{6}$ = $\dfrac{2^{\div2}\, x\, 5}{5\, x\, 6_{\div2}}$ = $\dfrac{1\, x\, 5^{\div5}}{5_{\div5}\, x\, 3}$ = $\dfrac{1\, x\, 1}{1\, x\, 3}$ = $\dfrac{1}{3}$

> DIVIDE NUMERATOR AND DENOMINATOR BY 2.

> DIVIDE NUMERATOR AND DENOMINATOR BY 5.

YOUR TURN. DON'T FORGET, YOU HAVE TO DO THE SAME TO THE TOP AND BOTTOM.

13. $\dfrac{1}{9}$ x $\dfrac{3}{4}$ = $\dfrac{1}{12}$

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

15. 6 x $\dfrac{11}{12}$ = $5\dfrac{1}{2}$

16. $\dfrac{5}{6}$ x $\dfrac{1}{6}$ = $\dfrac{5}{36}$

17. $\dfrac{3}{4}$ x 18 = $13\dfrac{1}{2}$

18. $\dfrac{9}{10}$ x $\dfrac{5}{7}$ = $\dfrac{9}{14}$

19. $\dfrac{2}{5}$ x $\dfrac{2}{3}$ = $\dfrac{4}{15}$

20. $\dfrac{2}{3}$ x $\dfrac{3}{8}$ = $\dfrac{1}{4}$