INTRO INTO MULTIPLYING FRACTIONS

EXAMPLE #1 RELATING MULTIPLICATION TO DIVISION

$$8 \div 2 = 4$$

$$\frac{1}{2} \times 8 \quad \text{MEANS} \quad \frac{1}{2} \text{ OF } 8 \quad \text{OR}$$

①②①②①②①②

> YOU ARE CUTIING THE 8 INTO 4 EQUAL PIECES, IN OTHER WORDS, YOU ARE DIVIDING 8 BY 2, WHICH EQUALS 4.

NOW YOUR TURN, DIVIDE THE WHOLE NUMBER BY DENOMINATOR

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

$$6 \div 1 = 2$$

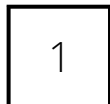2. $\frac{1}{2} \times 12 =$

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

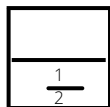4. $\frac{1}{4} \times 12 =$

5. $\frac{1}{6} \times 18 =$
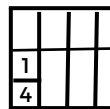
6. $\frac{1}{7} \times 35 =$

EXAMPLE #2 DRAWING

$$\frac{1}{4} \times \frac{1}{2} \quad \text{MEANS} \quad \frac{1}{4} \text{ OF } \frac{1}{2}$$
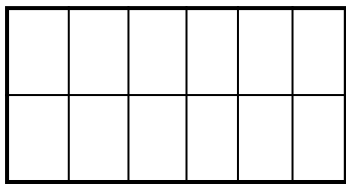
← 1 RECTANGLE

← $\frac{1}{2}$

← $\frac{1}{4}$ OF $\frac{1}{2}$ = $\frac{1}{8}$

> WE CAN USE A FIGURE TO BETTER UNDERSTAND THIS PROBLEM. WE HAVE 1/2 OF THE WHOLE RECTANGLE AND WE ARE GOING TO TAKE 1/4 OF THAT. WHICH GIVES US 1/8 OF THE WHOLE FIGURE.
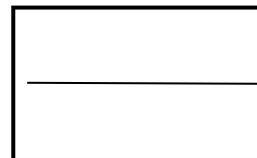
NOW YOUR TURN, USE THE RECTANGLES TO HELP SOLVE THE PROBLEMS BELOW

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

> 1. separate the rectangle into 2 parts 1/2
> 2. shade in 2/3 of one of the two pieces.
> 3. cut the other 4 parts into halves to make the pieces all the same size.
> 4. This shows you have two out of six pieces or 2/6

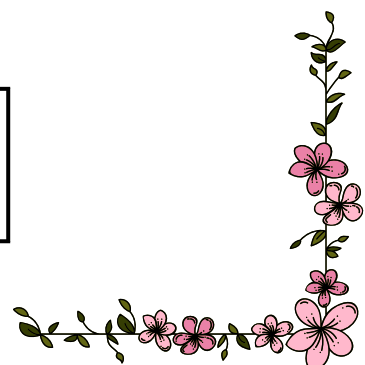8. $\frac{2}{2} \times \frac{1}{2} =$

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

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

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MULTIPLYING FRACTIONS - PRACTICE

THERE'S IS AN EASY WAY TO MULTIPLY FRACTIONS. MULTIPLY THE NUMERATORS(TOP NUMBERS) AND MULTIPLY THE DENOMINATORS(BOTTOM NUMBERS).

EXAMPLE # 3- MULTIPLYING STRAIGHT ACROSS

$$\frac{2}{3} \times \frac{2}{2} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$

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

$$\frac{3}{2} \times 8 = \frac{3}{2} \times \frac{8}{1} = \frac{24}{2}$$

BEFORE MULTIPLYING STRAIGHT ACROSS YOU NEED TO CHANGE THE 8 INTO A FRACTION. DO YOU SEE HOW WE PUT THE 8 OVER 1? $8 = \frac{8}{1}$

ON THIS PROBLEM, YOU END UP WITH IMPROPER FRACTION. YOU WILL NEED TO SIMPLIFY.

$$\frac{24}{2} \div \frac{2}{2} = \frac{12}{1} = 12$$

NOW YOUR TURN. MULTIPLY STRAIGHT ACROSS TO SOLVE THESE PROBLEMS. DON'T FORGET TO SIMPLIFY.

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

2. $\frac{7}{6} \times \frac{3}{2} =$

3. $\frac{9}{8} \times \frac{2}{1} =$

4. $\frac{11}{2} \times \frac{6}{2} =$

5. $\frac{2}{8} \times 10 =$

6. $6 \times \frac{5}{4} =$

7. $\frac{8}{5} \times \frac{8}{2} =$

8. $\frac{7}{6} \times \frac{2}{4} =$

9. $11 \times \frac{5}{10} =$

10. $\frac{5}{2} \times \frac{6}{5} =$

11. $\frac{4}{3} \times 8 =$

12. $\frac{6}{5} \times \frac{15}{8} =$

13. $\frac{7}{3} \times \frac{9}{2} =$

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

15. $\frac{7}{5} \times 20 =$

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