MULTIPLYING AND DIVIDING FRACTIONS

What Is Multiplying and Dividing Fractions with Unlike Denominators?

- When two fractions have unlike denominators, multiply the numerators and multiply the denominators to find the product.

    For example: $3/5 \times 2/3 = 6/15$

- When two fractions have unlike denominators, invert the divisor and multiply the two fractions.

    For example: $2/9 \div 3/5 \rightarrow 2/9 \times 5/3 = 10/27$

- The denominators do not have to be the same in order to complete the multiplication or division.

How to munominators:

- To **mul**ply the
    numeraary to change
    the den

$5/9 \times 3/6 = 15/54$

$7/10 \times 7/8 = 49/80$

- To **divide** two fractions with unlike denominators,
    - First invert the divisor.

    $1/3 \div 1/2 \rightarrow$ invert $1/2$ to $2/1$

    - After inverting the divisor, multiply the fractions

    $1/3 \div 1/2 \rightarrow 1/3 \times 2/1 = 2/3$

- Any number divided by 1 equals that number:

    $5 \div 1 = 5$ $34 \div 1 = 34$ $1/6 \div 1 = 1/6$

- Sometimes, the product resulting from multiplication or division can be **reduced**. This means dividing by one to make the denominator a lower value.

  For example, 8/10 can be reduced to 4/5 by dividing by 2/2 (an equivalent of 1).

$$12/15 \rightarrow 4/5$$

Divide both numerator and denominator by 3.

$$30/35 \rightarrow 6/7$$

Divide both numerator and denominator by 5.

- When multiplying or dividing fractions with unlike denominators, perform the operation and then reduce the product to lowest terms.

Try This!

Multiply and r

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Multiply and reduce to lowest terms: **4/5 x 2/6 =**

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Multiply and reduce to lowest terms: **6/7 x 1/3 =**

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Divide and reduce to lowest terms: **3/5 ÷ 2/3 =**

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Divide and reduce to lowest terms: **½ ÷ 4/5 =**

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