**Multiplying Rational Numbers #2**

Note: It is important to pay attention to the signs of the numbers.

**Like signs** result in a positive sign

1. positive x positive = **positive**
2. negative x negative = **positive**

**Unlike signs** result in a negative sign

1. positive x negative = **negative**
2. negative x positive = **negative**

Note: When you have multiple numbers in the same problem, count the number of negative signs. This will help you determine the final sign for the answer.

1. **Even number** of negative signs = a **positive answer** {ie… (-2)(-3) = +6}
2. **Odd number** of negative signs = a **negative answer** {ie… (-1)(-4)(-5) = -20}

**Multiplying more than two Rational Numbers:**

Ex (1): Find the product of $(-\frac{1}{2})(-\frac{1}{4})(-\frac{3}{5})$

$$\left(-\frac{1}{2}\right)\left(-\frac{1}{4}\right)\left(-\frac{3}{5}\right) = \frac{(-1) x(-1) x(-3)}{2 x 4 x 5} = -\frac{3}{40}$$

 Three Neg Fractions 🡪Multiply numerator with numerator 🡪 Negative Answer

 Multiply denominator with denominator

Ex (2): Find the product of $(-\frac{1}{5})(-\frac{7}{8})(2.5)$. Leave as a decimal answer.

 $\left(-\frac{1}{5}\right)\left(-\frac{7}{8}\right)\left(2.5\right) = \left(-0.2\right)\left(-0.875\right)\left(2.5\right) = 0.4375$

Two Negative Values 🡪 Multiply two negative #’s with one positive # 🡪 pos ans