**Multiplying and Dividing Rational Expressions**

**Example 1:** Simplify the following.

1.  b) 

**You Try!** Simplify the following.

1.  b) 

**Multiplying Rational Functions**

When multiplying rational functions (multiplying two fraction expressions together) you multiply straight across the top and straight across the bottom, simplifying where you can.



**Example 2:** Simplify completely.

 

**Example 3:** Simplify Completely.

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**You Try!** Multiply the following and state the restrictions.

1. 
2. $\frac{x^{2}+x-6}{x-5}•\frac{x^{2}-25}{x^{2}+4x+3}$

**Dividing Rational Functions**

When dividing rational functions, you multiply the first fraction by the **reciprocal** of the second fraction, simplifying where you can. **KEEP-CHANGE-FLIP!**



**Example 1:** Simplify completely and state the restrictions.

 

**Example 2:** Simplify Completely. State all restrictions. 

**You Try!** Divide the following. Be sure to state all restrictions.

1.  b)