**POLYNOMIAL DIVISION**

**TO DIVIDE A POLYNOMIAL BY A BINOMIAL THINK "D"**

**Divide** first terms:

\[
\frac{x^2}{x} = x
\]

**Distribute** the result across the **Divisor** and line up the terms under the **Dividend**:

\[
x(x - 2) = x^2 - 2x
\]

**Draw** the line, change the signs, and combine:

\[-(x^2 - 2x) = -x^2 + 2x\]

**Drop Down** the next term and **Do** it again!

**Divide** first terms.

**Distribute** the result.

**Draw** the line, change the signs, and combine...If there is a remainder, **Drop** it over the **Divisor**.

**Done!**

---

**EXAMPLE**

**Step 1:**

\[
x
\]

\[
\frac{x^2 - 5x + 6}{x - 2}
\]

**Step 2:**

\[
x
\]

\[
\frac{x^2 - 5x + 6}{x - 2}
\]

\[
x^2 - 2x
\]

**Step 3:**

\[
x
\]

\[
\frac{x^2 - 5x + 6}{x - 2}
\]

\[
-x^2 + 2x
\]

\[
-3x
\]

**Step 4:**

\[
x
\]

\[
\frac{x^2 - 5x + 6}{x - 2}
\]

\[
-x^2 + 2x
\]

\[
-3x + 6
\]

**Step 5:**

\[
\frac{x - 3}{x - 2}
\]

\[
\frac{x^2 - 5x + 6}{x - 2}
\]

\[
-x^2 + 2x
\]

\[
-3x + 6
\]

\[
3x - 6
\]

\[
0
\]