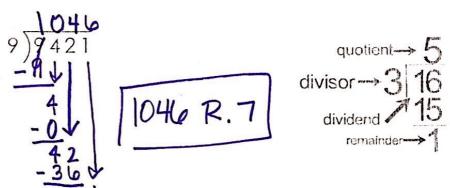
Dividing Polynomials (Long Division)

Divide using Long Division:



Now let's do the same thing, but with polynomials.

Step 1: Rewrite the dividend in standard formula in any gaps in the exponent order with a coefficient of 0 followed by the missing variable of needed).

Step 2: Rewrite the divisor in standard form, filling in any gaps in the exponent order with a coefficient of 0 followed by the missing variable (if needed).

Step 3: Divide the first term of the dividend by the first term of the divisor. This creates your quotient. Multiply through.

Step 4: Drop down the next term in the dividend. SUBTRACT like terms. Signs will always change!

Step 5: Repeat Steps 3 and 4 until you cannot divide any further.

Step 6: Whatever is left over is called your remainder. You write the answer as the quotient from the top plus remainder over divisor.

Step 7: If your remainder is 0, then the quotient at the top is your final answer.

