Multiplying Polynomials

Apply the distributive property - multiply every term in the first polynomial by every term in the second polynomial

**You may need to apply the distributive property multiple times if you have more than two polynomials.

$(x-2)(3x^2+4x+2)$

$3x^3+4x^2+2x-6x^2-8x-4$

$3x^3-2x^2-6x-4$

You can also use a rectangle model:

	$3x^2$	$4x$	2
x	$3x^3$	$4x^2$	$2x$
-2	$-6x^2$	$-8x$	-4

$3x^3-2x^2-6x-4$

Or you can multiply vertically:

$$\begin{array}{r} 3x^2+4x+2 \\ \times \quad x-2 \\ \hline -6x^2-8x-4 \\ 3x^3+4x^2+2x \\ \hline 3x^3-2x^2-6x-4 \end{array}$$