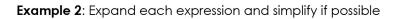
	2.3	Mu	lt P	olyr	nom	ials								
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2.3 Multiplication of Polynomials

Use the **DISTRIBUTIVE LAW** to multiply polynomials:

- Multiply each term of the first polynomial by each term of the second polynomial.
- Combine like terms

Example 1: Expand and simplify if possible b) $3a(a^2 - 2a + 7)$ a) -3x(4x+1) $-3_{\chi}(4_{\chi}) + (-3_{\chi})(1)$ $3\alpha(\alpha^2) + 3\alpha(-2\alpha) + 3\alpha(7)$ $-12x^2 - 3x$ $3a^3 - 6a^2 + 21a$ c) $3 - x(4x^2 - 3x + 1)$ d) 2(x+1) + 3(x-4) $3 - x(4x^{2}) - x(-3x) - x(1) \qquad 2(x) + 2(1) + 3(x) + (3)(-4)$ $= 3 - 4x^{3} + 3x^{2} - x$ 2x + 2 + 3x - 12 $= -4\chi^3 + 3\chi^2 - \chi + 3$ $5\chi - 10$ FOIL e) (x+1)(x-4) $\chi(\chi) + \chi(-4) + \iota(\chi) + \iota(-4)$ $\chi^2 - 4\chi + \chi - 4$ $x^2 - 3x - 4$ Mrs.Shaw F&PC 10



a)
$$(3x-5y)^{2}$$

 $(3x-5y)(3x-5y)$
 $3[y(y)+y(-y)+\theta(y)+\theta(-y)]$
 $3x(5x)+3x(-5y)-5y(3x)-5y(-5y)$
 $3[y^{2}-9y+9y-7z]$
 $9x^{2}-15xy-15xy+25y^{2}$
 $3[y^{2}+3y-21b]$
 $3y^{2}+3y-21b$
 $3y^{2}+3y-21b$
 $(3x^{2}-1bx+3x^{2}(x)+3x^{2}(x))$
 $4x(x)+4x(-4) + 3x^{2}(x)+3x^{2}(x)$
 $4x(x)+4x(-4) + 3x^{2}(x$