Warm up

Simplify

1) $-4x^3(x^2 + 3x - 5)$

$-4x^5 - 12x^4 + 20x^3$

2) $2x^3(3x^5 + 2x^3 - 4x)$

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

3) $(2+3)(2x + 1)$ $5(2x+1)$ $10x+5$

$(2+3)(2x+1)$

$4x+2+6x+3$

2-3 Multiplying Binomials

I can multiply two binomials.

I can square a binomial.

How do we do this?

$$(a+b)(c+d)$$

$ac + ad + bc + bd$

$u = a + b$

First
Out
In
Last

$(x+2)(x+6)$

$x^2+6x+2x+12$

$x^2+8x+12$

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

	x^2	4
x^2	x^4	$4x^2$
-3	$-3x^2$	-12

x^4+1x^2-12

Simplify by distribution

16) $(9x+7)(6x+4)$

$54x^2+36x+42x+28$

$54x^2+78x+28$

17) $(6x+3)(-5x+2)$

$-30x^2+12x$

$-15x+6$

$-30x^2-3x+6$

18) $(16x-19)(8x-8)$

$128x^2-280x$

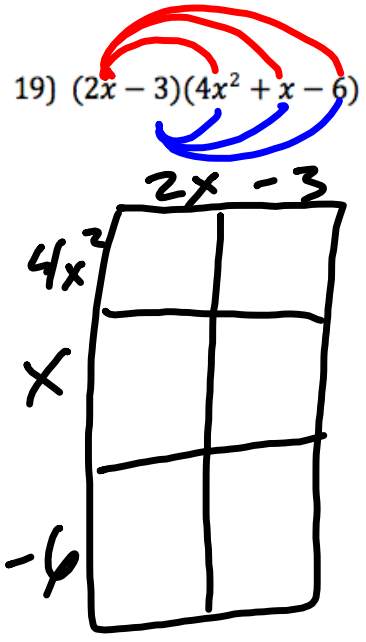
$+152$

$128x^2-128x$

$-152x+152$

Based on what you know about multiplying polynomials using the distributive property. Discover on your own how to simplify by distributing the binomial with the trinomial.

19) $(2x-3)(4x^2+x-6)$



Expand

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

$x^2+4x+4x+16$

You Try $x^2+8x+16$

$(2x-5)^2$ $(2x-5)(2x-5)$

$4x^2-10x-10x+25$

$4x^2-10x+25$

$(3p+5)^2$

$(4x-2)^2$