



Mar 23-8:20 AM

Convert Vertex Form to Standard Form

ex. $y = (x+3)^2$
 $y = (x+3)(x+3)$
 $y = x^2 + 3x + 3x + 9$
 $y = x^2 + 6x + 9$

ex. $y = 2(x+4)^2$
 $y = 2(x+4)(x+4)$
 $= 2(x^2 + 8x + 16)$
 $= 2x^2 + 16x + 32$

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

$= x^2 + 8x + 16$

Try these:

$y = (x+5)^2$

$y = 3(x+1)^2$

$y = 2(x+6)^2 - 5$

Mar 23-8:30 AM

Try these:

$$y = (x+5)^2$$

$$y = (x+5)(x+5)$$

$$y = x^2 + 5x + 5x + 25$$

$$y = x^2 + 10x + 25$$

$$y = 3(x+1)^2$$

$$y = 3(x+1)(x+1)$$

$$y = 3(x^2 + 2x + 1)$$

$$y = 3x^2 + 6x + 3$$

	x	$+1$
x	x^2	x
-1	x	1

$$= x^2 + 2x + 1$$

$$y = 2(x+6)^2 - 5$$

$$y = 2(x+6)(x+6) - 5$$

$$y = 2(x^2 + 12x + 36) - 5$$

$$y = 2x^2 + 24x + 72 - 5$$

$$y = 2x^2 + 24x + 67$$

	x	$+6$
x	x^2	$6x$
$+6$	$6x$	36

Mar 23-8:55 AM