Warm Up Questions

1. $y = x^2-6x-1$
2. $y = -x^2 -8x +3$
3. $y = x^2+4x-10$
4. $y = -x^2-10x +1$

1. $y = x^2 - 6x - 1$

$y + 1 = x^2 - 6x$

$y + 1 + 9 = x^2 - 6x + 9$ (÷2)

$y + 10 = (x-3)^2$

$y = (x-3)^2 - 10$

$(x-3)(x-3)$

$x^2 - 3x - 3x + 9$

$x^2 - 6x + 9$

2. $y = -x^2 - 8x + 3$

$y - 3 = -x^2 - 8x$

$y - 3 = -1(x^2 + 8x)$

$y - 3 - 16 = -1(x^2 + 8x + 16)$

$y - 19 = -1(x + 4)^2$

$y = -1(x + 4)^2 + 19$

3. $y = x^2+4x-10$

$y+10=+4 = x^2+4x+4$

$y+14 = (x+2)^2$

$y = (x+2)^2-14$

4. $y = -x^2 - 10x + 1$

$y - 1 = -x^2 - 10x$

$y - 1 = -1(x^2 + 10x)$

$y - 1 = -1(x^2 + 10x + 25)$

$y - 1 - 25 = -1(x+5)^2$

$y - 26 = -1(x+5)^2$

$y = -1(x+5)^2 + 26$

$$y = 2x^2 - 8x - 1$$

$$y + 1 = 2x^2 - 8x$$

$$y + 1 = 2(x^2 - 4x)$$

$$y + 1 + 8 = 2(x^2 - 4x + 4)$$

$$y + 9 = 2(x - 2)^2$$

$$y = 2(x - 2)^2 - 9$$