

Vertex Form into Standard Form

- Steps for translating quadratic function from vertex back to standard form if $a = 1$

Step 2: Now, we have two binomials and the operation is multiplication, and to get the product of two binomials, we need to use the FOIL method.

Example 1:

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


$$\begin{aligned} F &= (x)(x) = x^2 \\ O &= (x)(2) = 2x \\ I &= (2)(x) = 2x \\ L &= (2)(2) = 4 \end{aligned}$$

$$\rightarrow y = x^2 + 2x + 2x + 4 + 3$$