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## Converting from Vertex to Standard Form

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- Steps:
1. Make a box to multiply for what is in parenthesis
  2. Multiply the a
  3. Add/Subtract the constant

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

2.  $y = -3(x+2)^2 + 5$

3.  $y = -(x-1)^2 - 1$

4.  $y = 5(x+7)^2 - 12$

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## Converting from Standard to Vertex Form

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- Steps:
1.  $x = \frac{-b}{2a}$
  2. Substitute x into equation to get y
  3. Write it in vertex form:  $a(x-h)^2 + k$

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

2.  $y = 3x^2 - 12x + 5$

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

4.  $y = 5x^2 - 12$