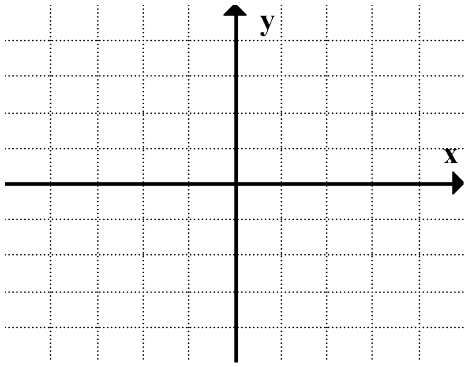
C11 - 3.1 - Graph Stand Form TOV WS $(x^2 + q)$

Graph the following equations using a table of values. State the Vertex.

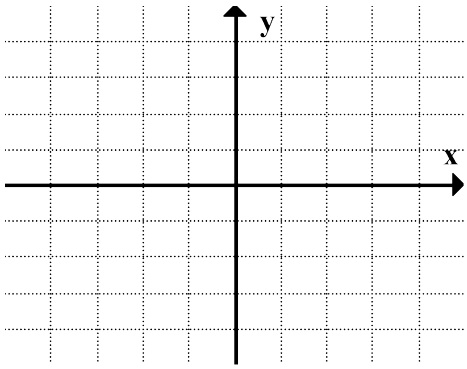
$y = x^2$

x	y



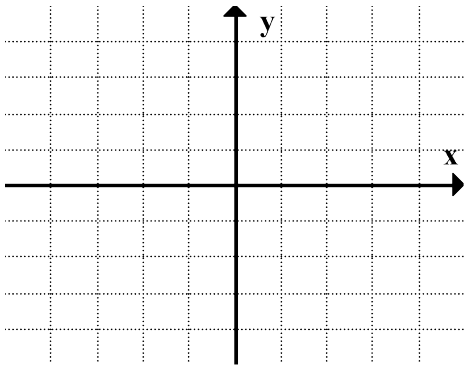
$y = x^2 - 4$

x	y



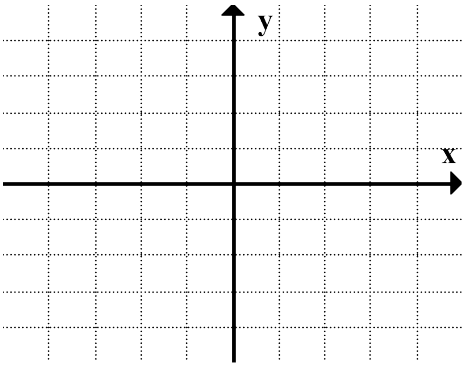
$y = x^2 + 2$

x	y



$y = x^2 - 1$

x	y

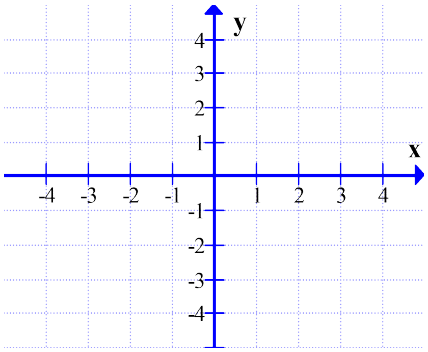


C11 - 3.1 - Graphing Vertex Form TOV WS (a=1)

Graph the following equations using a table of values, on graph paper. State the Vertex. Choose increments away from Vertex.

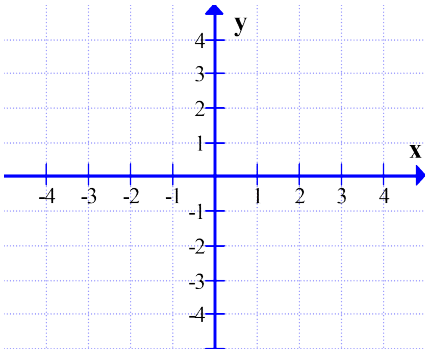
$y = x^2$ ⟶ $y = 1(x - 0)^2 + 0$

x	y



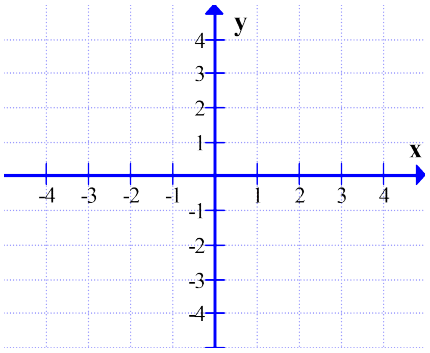
$y = (x + 2)^2$

x	y



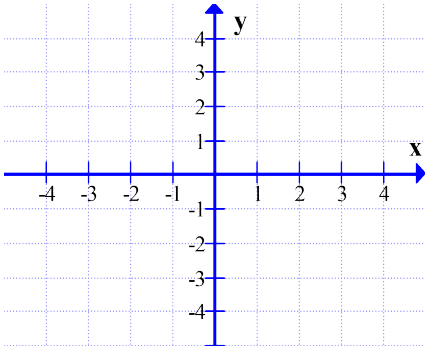
$y = (x - 1)^2$ ⟶ $y = (x - 1)^2 - 0$

x	y



$y = (x - 3)^2$

x	y

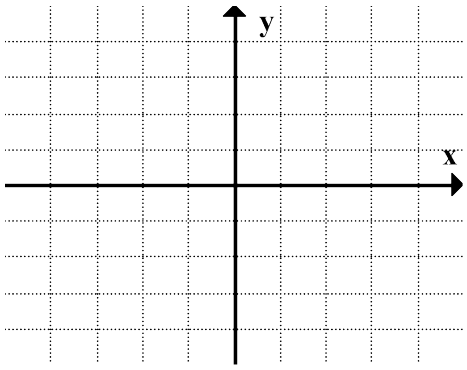


C11 - 3.1 - Graph Stand Form TOV WS $(-ax^2)$

Graph the following equations using a table of values, on graph paper. State the Vertex. Choose your own increments.

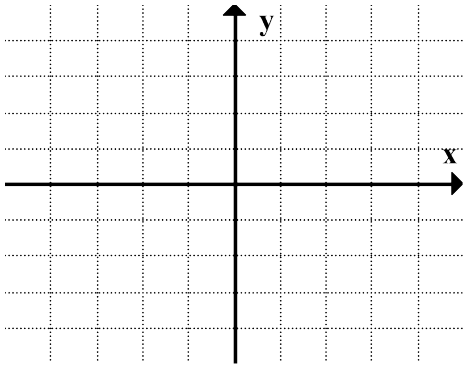
$y = -x^2 + 4$

x	y



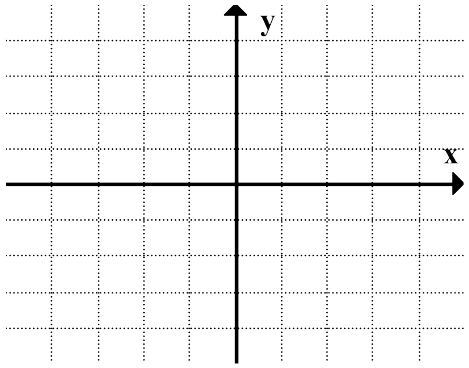
$y = -x^2$

x	y



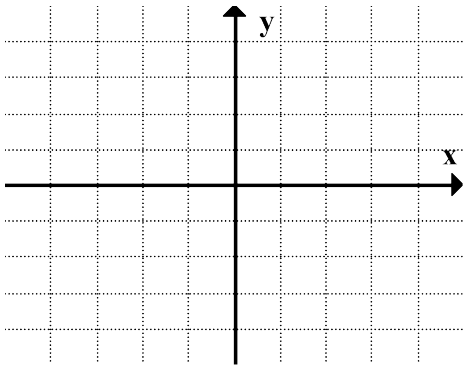
$y = -2x^2 + 2$

x	y



$y = -x^2 + 1$

x	y

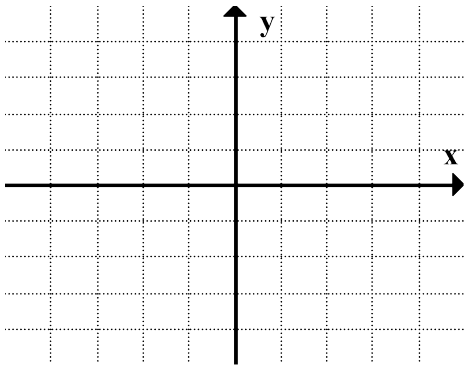


C11 - 3.2 - Graph Stand Form TOV WS (ax^2)

Graph the following equations using a table of values, on graph paper. State the Vertex. Choose your own increments.

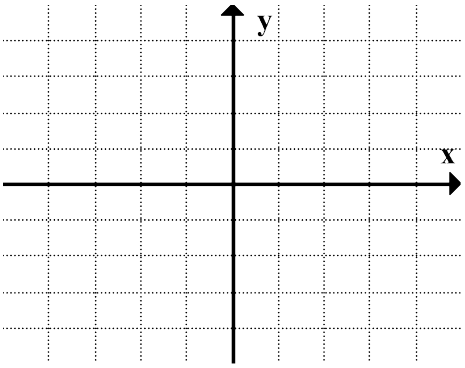
$y = 2x^2$

x	y



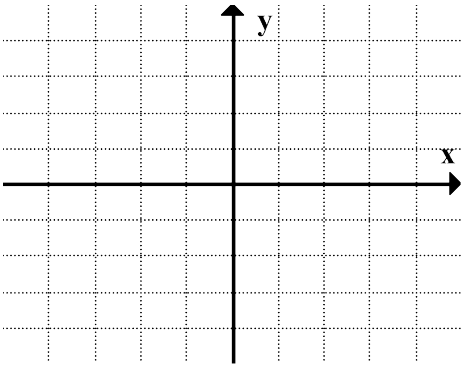
$y = 2x^2 - 2$

x	y



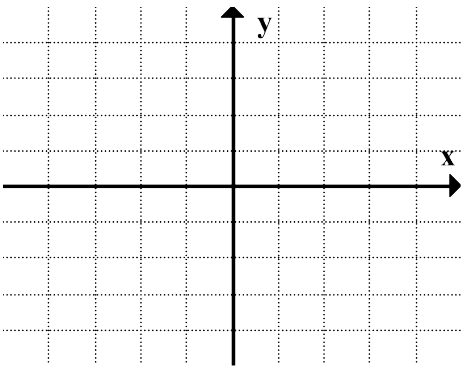
$y = 2x^2 + 2$

x	y



$y = 3x^2 - 3$

x	y

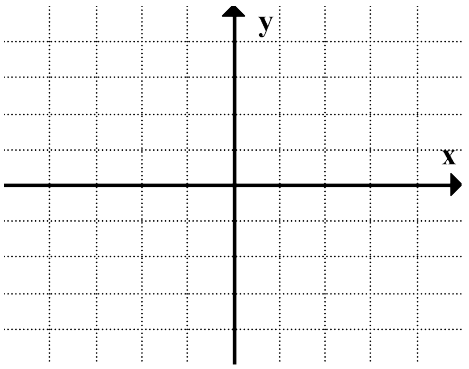


C11 - 3.2 - Graph Stand Form TOV WS (ax^2)

Graph the following equations using a table of values. State the Vertex.

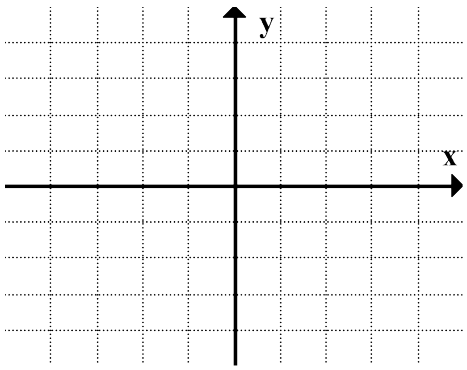
$y = x^2$

x	y



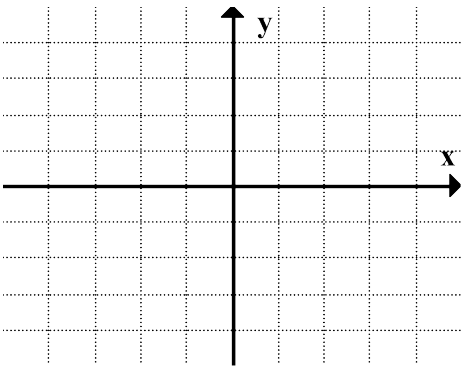
$y = 2x^2$

x	y



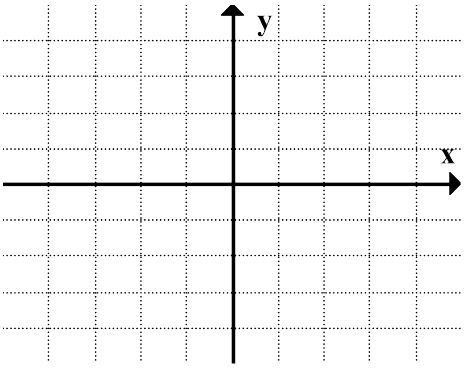
$y = \frac{1}{2}x^2$

x	y



$y = 3x^2 - 1$

x	y

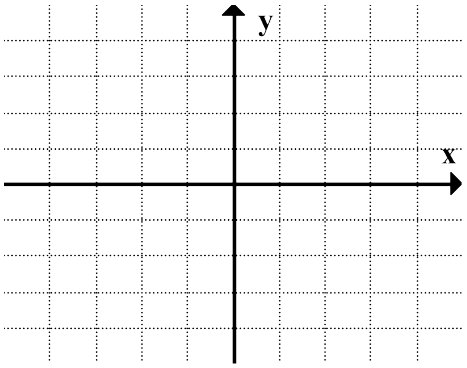


C11 - 3.2 - Graph Stand Form TOV WS ($\frac{1}{2}x^2$)

Graph the following equations using a table of values, on graph paper. State the Vertex. Choose your own increments.

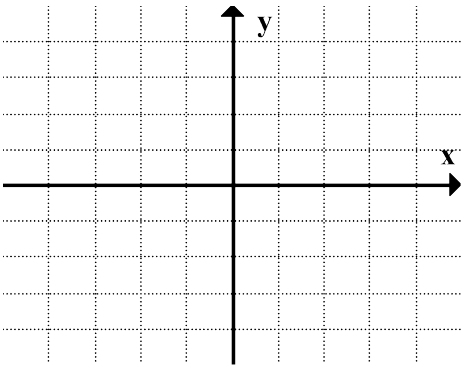
$y = \frac{1}{2}x^2$

x	y



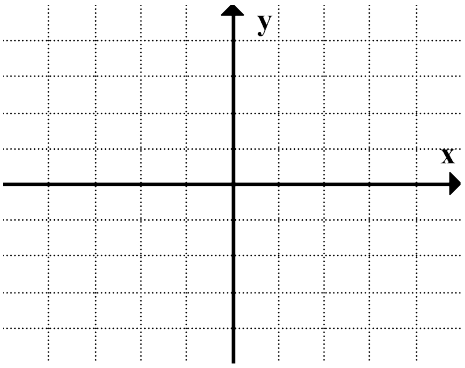
$y = \frac{1}{2}x^2 - 4$

x	y



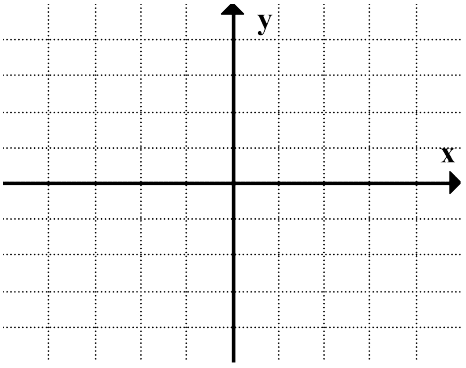
$y = \frac{1}{2}x^2 - 8$

x	y



$y = \frac{1}{4}x^2 + 1$

x	y

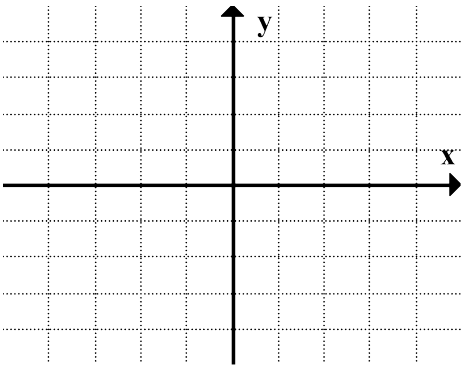


C11 - 3.2 - Graphing Vertex Form TOV WS $(a = -1)$

Graph the following equations using a table of values, on graph paper. Choose your own increments.

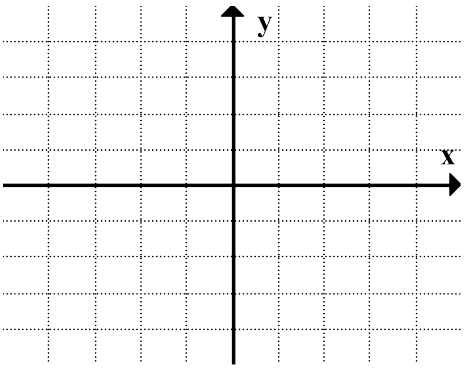
$y = (x - 2)^2 - 4$

x	y



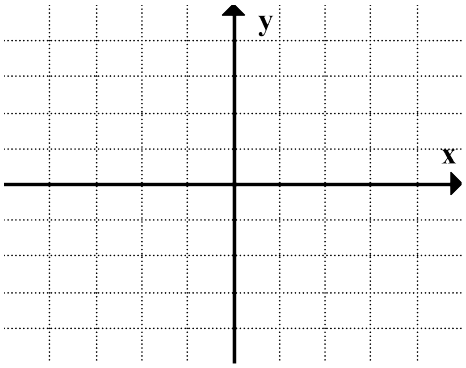
$y = (x + 1)^2 - 4$

x	y



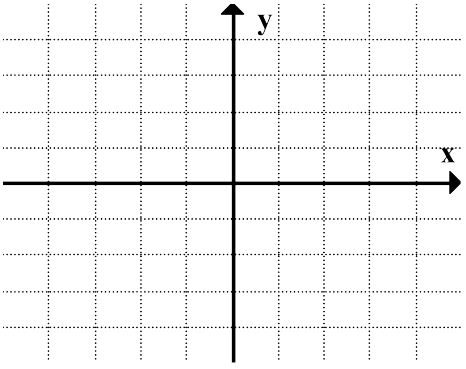
$y = (x - 2)^2 - 1$

x	y



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

x	y

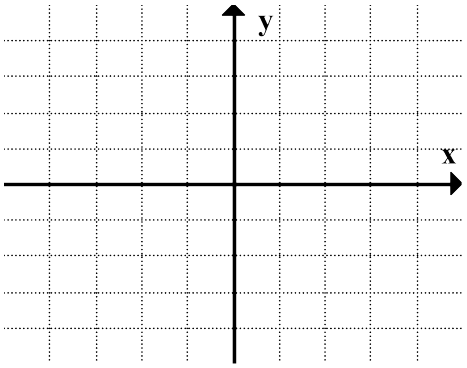


C11 - 3.2 - Graphing Vertex Form TOV WS ($a \neq 1$)

Graph the following equations using a table of values, on graph paper. Choose your own increments.

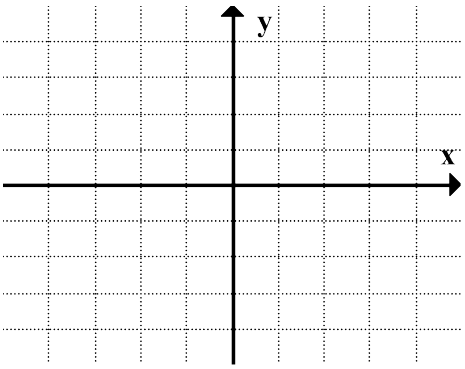
$y = 2(x + 1)^2 + 1$

x	y



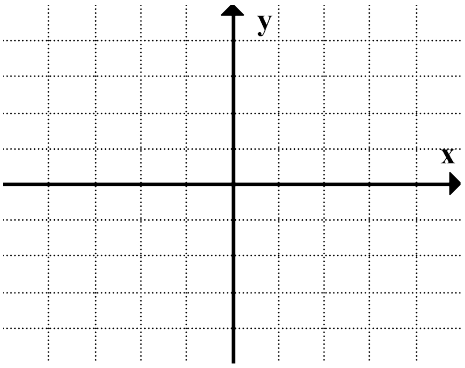
$y = 2(x + 2)^2 + 3$

x	y



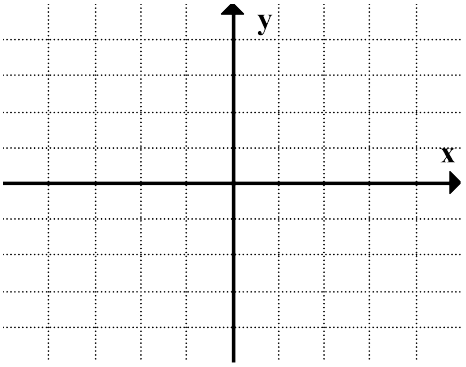
$y = \frac{1}{2}(x - 1)^2 - 2$

x	y



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

x	y

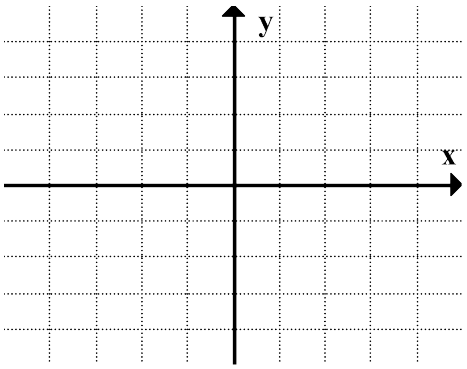


C11 - 3.2 - Graphing Vertex Form TOV WS $(a = -\#)$

Graph the following equations using a table of values, on graph paper. Choose your own increments.

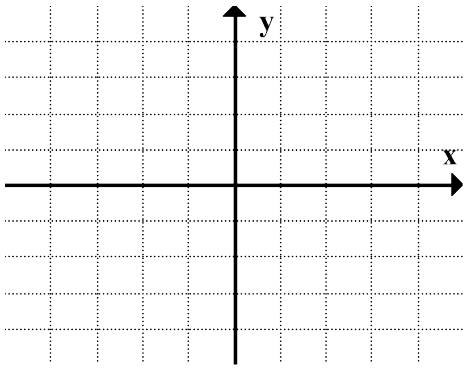
$y = -(x+1)^2 + 1$

x	y



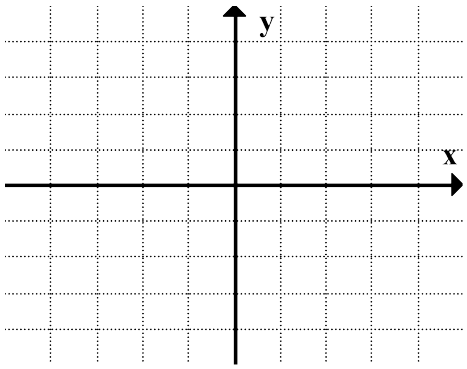
$y = -2(x+2)^2 - 2$

x	y



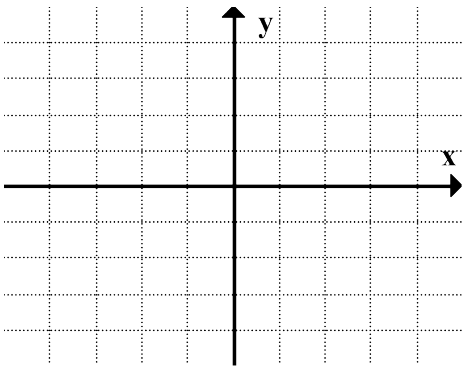
$y = -\frac{1}{2}(x-1)^2 + 2$

x	y



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

x	y



C11 - 3.3 - Foil HW

Multiply Out

$y = (x+3)^2$

$y = (x-2)^2$

$y = \left(x+\frac{1}{2}\right)^2$

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

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

$y = \left(x+\frac{1}{3}\right)^2 + \frac{1}{2}$

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

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

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

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

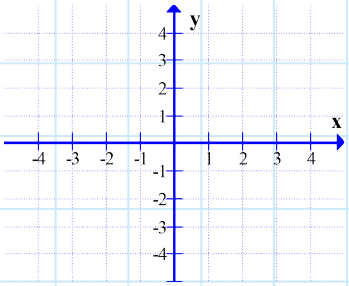
$y = -2(x-3)^2 + 2$

$y = -\frac{1}{2}(x+2)^2 - 3$

C11 - 3.3 - Completing the Square/Perfect Square HW

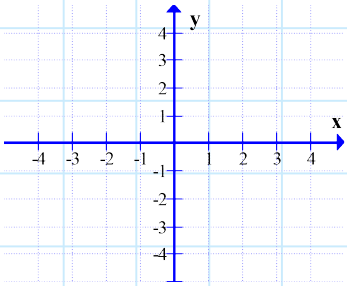
What value of "c" makes the following a perfect square, factor and write as a perfect square and the vertex: (x, y) and sketch a graph.

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

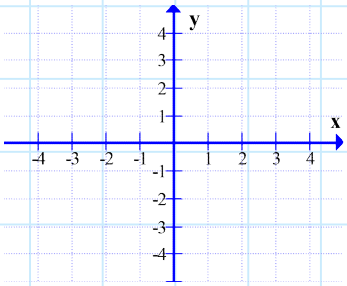


Complete the square and write the vertex: (x, y) and sketch a graph.

$y = x^2 + 6x + 5$



$y = 2x^2 - 8x + 9$



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

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

$y = 2x^2 - 10x$

$y = -2x^2 - 12x - 15$

$y = x^2 + 4x + 1$

$y = x^2 + 8x$

$y = \frac{1}{2}x^2 + 4x + 2$

$y = 2x^2 - 6x + 17$

C11 - 3.3 - Completing the Square/Perfect Square HW

Perfect square: $y = (x - p)^2$

What value of "c" makes the following a perfect square, factor and write as a perfect square.

$y = x^2 + \frac{1}{2}x + c$

$y = x^2 - \frac{2}{3}x + c$

Complete the square and write the vertex: (x, y).

$y = x^2 + \frac{1}{2}x + 5$

$y = x^2 + \frac{1}{4}x + 1$

$y = x^2 - \frac{3}{2}x + 4$

$y = x^2 + \frac{2}{3}x$

$y = \frac{1}{2}x^2 - 2x + 9$

$y = 2x^2 - \frac{2}{3}x + 17$

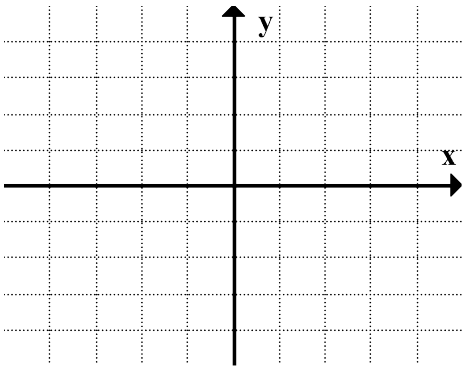
$y = -2x^2 - \frac{3}{2}x - 15$

$y = 2x^2 - .05x$

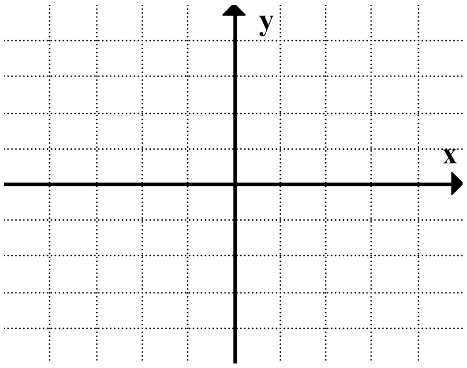
C11 - 3.4 - Find Equation in Vertex Form HW

Find equation in Vertex Form and graph.

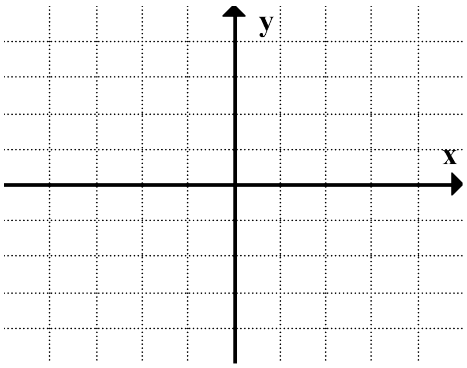
$Vertex$: $(1, -4)$
$Point$: $(2, -3)$



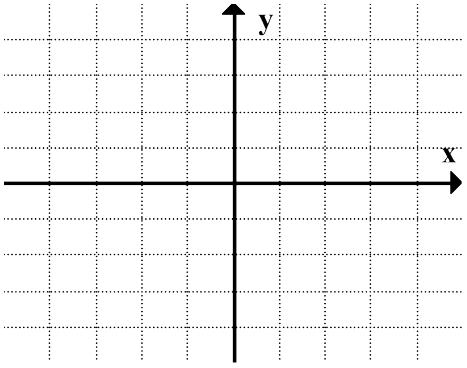
$Vertex$: $(-1, -2)$
$Point$: $(1,2)$



$Vertex$: $(3, -4)$
$Point$: $(2, -2)$



$Vertex$: $(2,1)$
$y - int = -3$



C11 - 3.5 - Vertex:$(-\frac{b}{2a}, y)$ Quadratics in Standard Form WS

Find the Vertex

$Vertex = \left(\frac{-b}{2a}, y\right)$

$Vertex = \left(\frac{-b}{2a}, y\right)$

$y = x^2 - 6x - 7$

$y = x^2 + 4x - 5$

$y = x^2 + 8x + 7$

$y = x^2 + 6x - 16$

$y = x^2 - 2x - 15$

$y = x^2 - 10x + 9$

$y = 2x^2 - 12x - 14$

$y = 4x^2 + 6x - 3$

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

$y = x^2 + \frac{1}{2}x + 5$

$y = 2x^2 - \frac{1}{2}x + 9$

$y = -2x^2 - .05x$

C11 - 3.6 - Quadratic Word Problems

Two numbers have a difference of 8. Their product is a minimum. Sketch a Graph and Find the numbers.

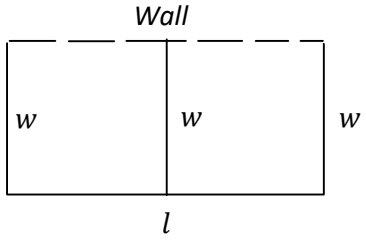
Two numbers differ by 10. The product of the larger number and twice the smaller number is a minimum. Sketch a Graph and Find the numbers.

Two numbers sum to 8. The sum of their squares is a minimum. Sketch a Graph and Find the numbers.

C11 - 3.7 - Quadratic Word Problems

Jack has 60m of fencing to build a three sided fence on the side of his house. Determine the maximum possible area of the fenced area, and the dimensions of the fence.

A rectangular 3 sided fence that is split in half is against a wall. The total fencing length is 42 m. What is the max area of the fence and dimensions?



C11 - 3.8 - Bridge Find Equation HMK

A bridge has pillars 20 m tall and are 80 m apart. The maximum at the center of the bridge is 60 m tall. Find the equation of the parabolic bridge. What is the height 6 m away from each pillar.