Graphing in STANDARD FORM – $f(x) = ax^2 + bx + c$

EXAMPLE - Graph the function: $\boldsymbol{f(x) = 4x^2 - 8x + 1}$

To find the axis of symmetry:

$x = -\frac{b}{2a} =$ _____ $=$ _____ $=$

To find the vertex, plug _____ back into the equation.

$\boldsymbol{f(\_\_\_) = 4(\quad)^2 - 8(\quad) + 1 =}$

Key Features:

a = _____ b = _____ c = _____

The parabola will open UP or DOWN

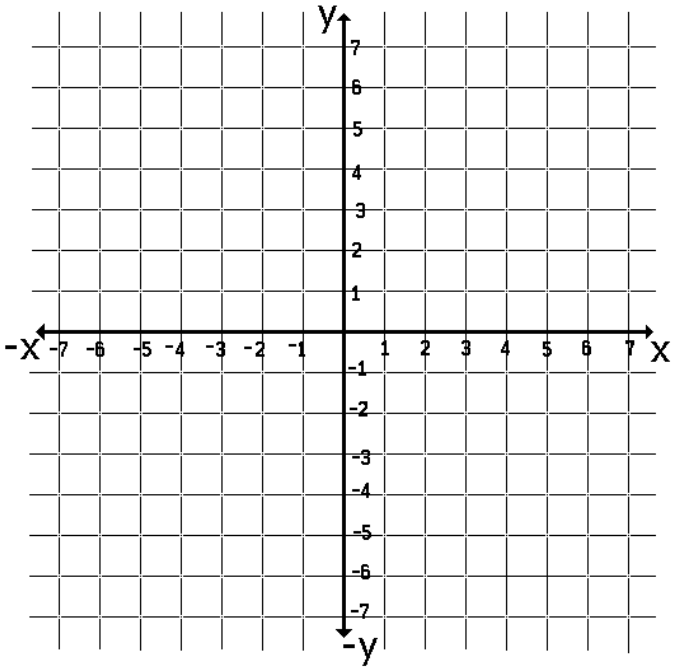
The parabola has a MAX or MIN

The axis of symmetry at $x =$ _____

Vertex at (,)

y-intercept = (,)

point = (,)



YOU TRY - Graph the function: $\boldsymbol{f(x) = -\frac{1}{2}x^2 + 2x - 1}$

Key Features:

a = _____ b = _____ c = _____

The parabola will open UP or DOWN

The parabola has a MAX or MIN

The axis of symmetry at $x =$ _____

Vertex at (,)

y-intercept = (,)

point = (,)