U2D3 MCR 3UI **QUADRATIC FUNCTIONS**

Partial Factored Form **Example** $y = -3x(x - 4) + 12$

State:

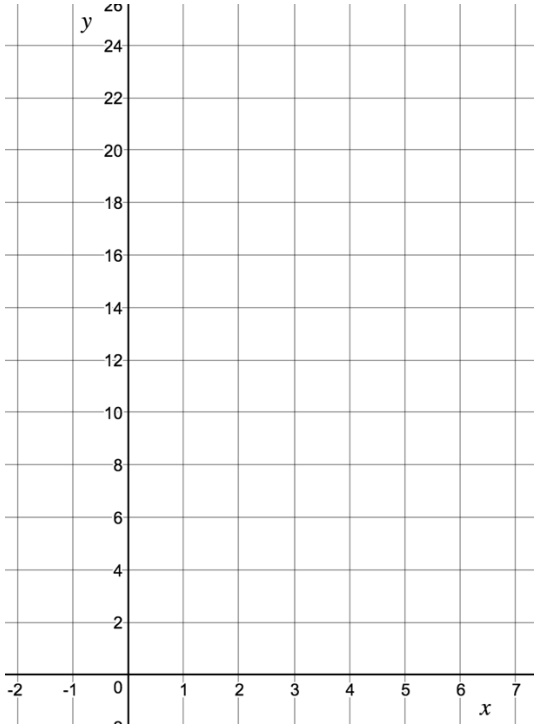
direction of opening **y-int**

2 points equidistant to the axis of symmetry

Axis of Symmetry **When the optimal value occurs**

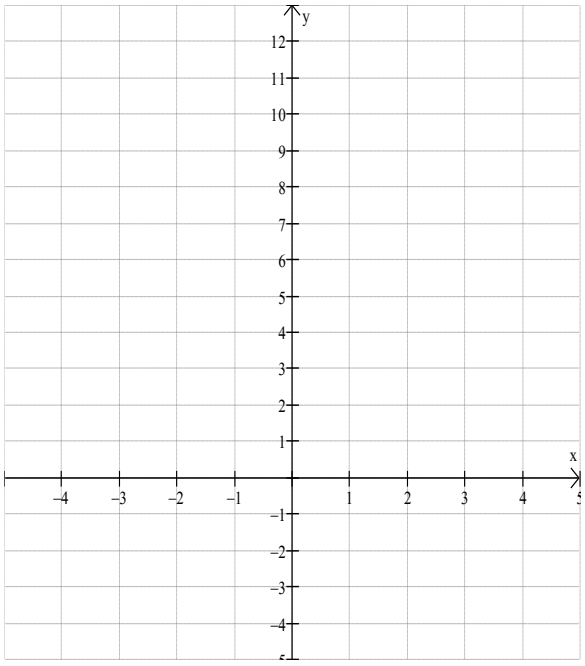
Max/Min **vertex**

Standard Form Equation

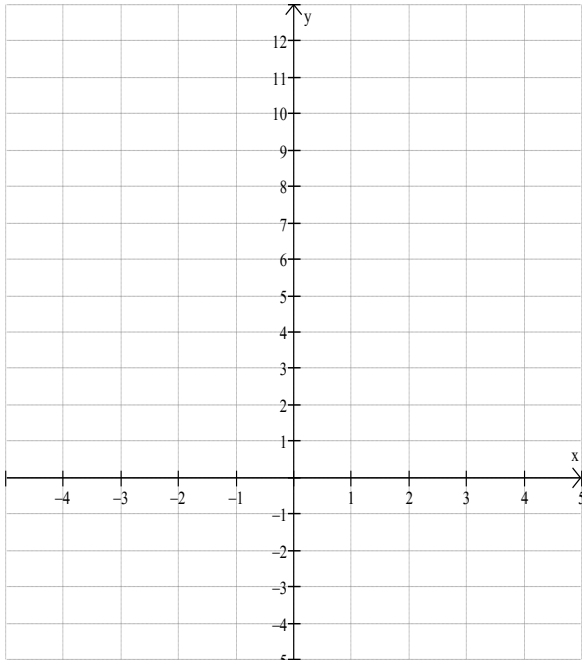


Graphing: Graph the following.

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



b) $y = -2x^2 - 8x - 2$



In General

Vertex Form

$$y = a(x-p)^2 + q$$

Standard Form

$$y = ax^2 + bx + c$$

Partial Factored Form

$$y = ax(x-d) + c$$

Factored Form

$$y = a(x-s)(x-t)$$

U2D3 HW: Handout 2-1