A quadradic function

$f(x) = ax^2 + bx + c$

A parabola is

A vertex is

An axis of symmetry

$f(x) = ax^2 + bx + c$

When a is positive,

When a is negative,

$f(x) = ax^2 + bx + c$

If $|a| > 1$,

If $|a| < 1$,

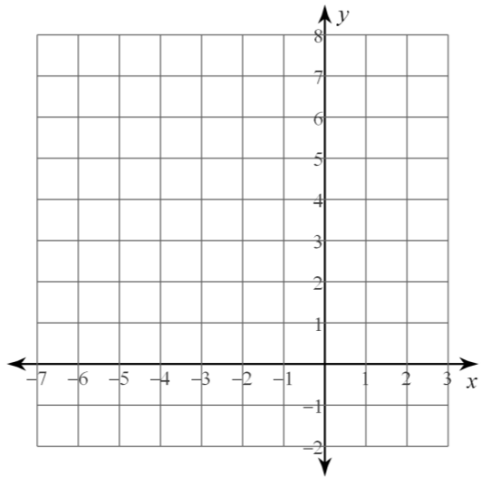
$f(x) = ax^2 + bx + c$

The axis of symmetry

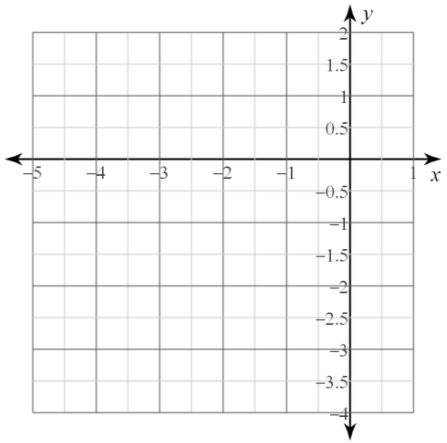
$f(x) = ax^2 + bx + c$

The y-intercept

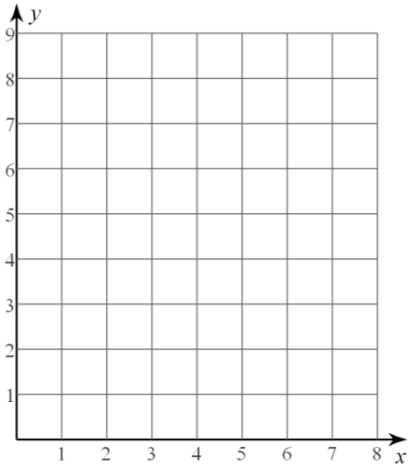
$y = 2x^2 - 4x + 1$



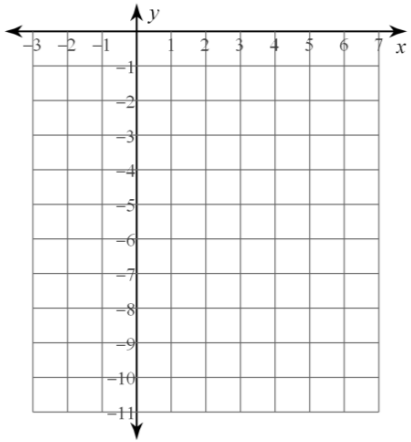
$y = -x^2 - 6x - 8$



$y = x^2 - 6x + 13$



$y = -2x^2 + 8x - 10$



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