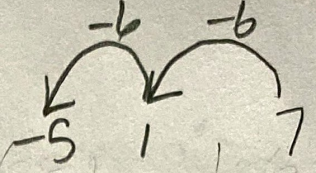
Unit 6 – Exemplary Practice

1) A parabola has a general form of

$f(x) = 2x^2 - 4x - 70$.



The parabola has an x-intercept of (7,0), and an axis of symmetry of $x = 1$.

a) Find the other x-intercept and write the quadratic function f(x) in factored form.

(-5,0)

$f(x) = 2(x+5)(x-7)$

b) Find the vertex and write the quadratic function f(x) in vertex form.

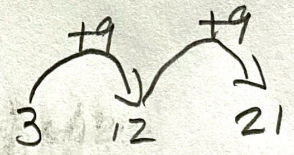
(1,-72)

$2(1)^2-4(1)-70$

$f(x) = 2(x-1)^2-72$

2) A parabola has a general form of

$f(x) = -3x^2 + 72x - 189$.



The parabola has an x-intercept of (3,0), and an axis of symmetry of $x = 12$.

a) Find the other x-intercept and write the quadratic function f(x) in factored form.

(21,0)

$f(x) = -3(x-3)(x-21)$

b) Find the vertex and write the quadratic function f(x) in vertex form.

(12,243)

$-3(12)^2+72(12)-189$

$f(x) = -3(x-12)^2+243$