

## Math 115E Activity 17

### Chapter 5 Quadratic Applications

## Properties of Quadratic Equations

#1 Given the Function  $f(x) = x^2 - 4x - 5$

(a) Find the x-intercepts:

(b) Find the y-intercepts:

(c) Find the Vertex:

(d) Find the Domain:

(e) Find the Range:

#2 Given the Function  $g(x) = -2x^2 - 4x + 2$

(a) Find the x-intercepts:

(b) Find the y-intercepts:

(c) Find the Vertex:

(d) Find the Domain:

(e) Find the Range:

#3 Given the Function  $h(x) = 3x^2 - 6x$

(a) Find the x-intercepts:

(b) Find the y-intercepts:

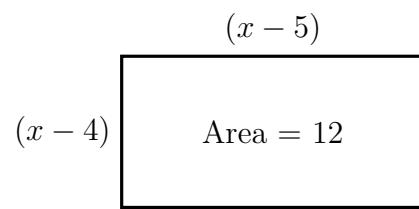
(c) Find the Vertex:

(d) Find the Domain:

(e) Find the Range:

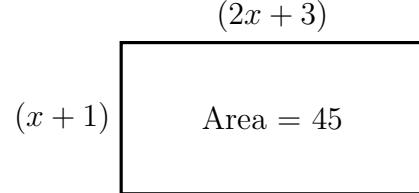
## Quadratic Equations as an area of a rectangle

- #1 Given that the Area is 12, the Height is  $(x - 4)$  and the Length is  $(x - 5)$



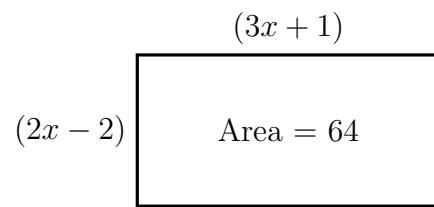
Find the numerical length and height.

- #2 Given that the Area is 45, the Height is  $(x + 1)$  and the Length is  $(2x + 3)$



Find the numerical length and height.

- #3 Given that the Area is 64, the Height is  $(2x - 2)$  and the Length is  $(3x + 1)$



Find the numerical length and height.