Math 115E Activity 16

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:

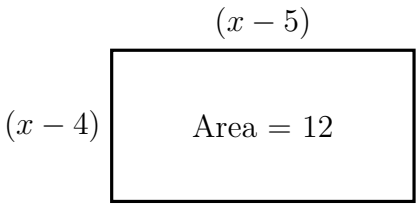
(e) Find the Range:

Your Name: October 30th 2025

Quadratic Equations as an area of a rectangle

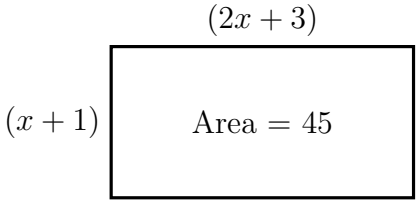
#1 Given that the Area is 12, the Height is $(x-4)$ and the Length is $(x-5)$

Find the numerical length and height.



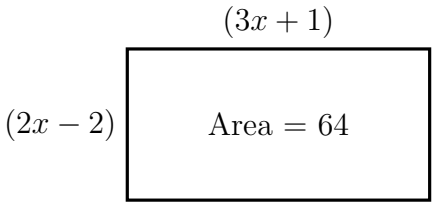
#2 Fiven that the Area is 45, the Height is $(x+1)$ and the Length is $(2x+3)$

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.



Find the vertex for $f(x) = x^2 + 2x + 4$
and it is a min or max?