

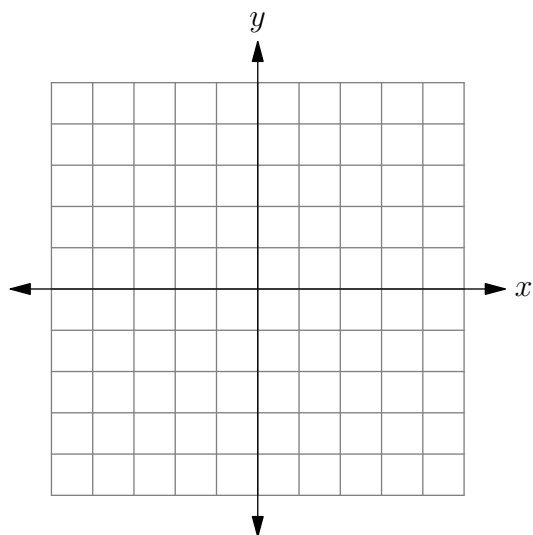
Retake 6B: Quadratic functions

MATH 1110, FALL 2017

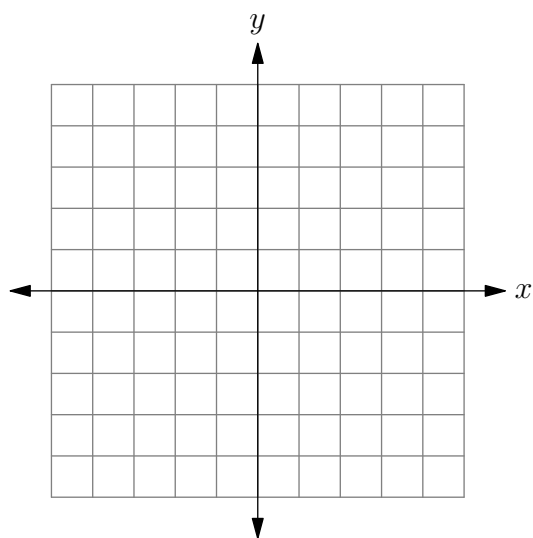
NAME:

1. (10 points) Graph each of the following parabolas.

(a) $f(x) = \frac{1}{2}x^2 - 3x - \frac{1}{2}$



(b) $y = -x^2 - 6x - 8$



2. (10 points) A experimental aircraft is launched at time $t = 0$. Its height above the ground is given by the function

$$y(t) = -5t^2 + 90t + 250,$$

where y is height (in meters) and t is time (in seconds).

- (a) How high is the aircraft at the time it is launched?

- (b) How high is it after 3 seconds?

- (c) What is its maximum height?

- (d) At what time does the aircraft strike the ground?