Name:

Graph the following equation and list all key points/features.

1. $y = -2x^2 + 12x + 3$
Y – Intercept:
Axis of Symmetry:
Vertex:
Max or Min?
Zeros:



- 2. A ball is thrown up into the air and can be modeled by the function $h = -16t^2 + 50t + 5$, where *h* is height in feet and *t* is time in seconds.
 - X = Y =
 - a. How long is the ball in the air for?
 - b. What is the maximum height that the ball reaches?
 - c. At what time does the ball reach the maximum height?
 - d. What is a reasonable domain and range to model this problem?
- ^{11.} Suppose you hit a baseball and its flight takes a parabolic path. The height of the ball at certain times appears in the table.

x =

y =

a) Write a quadratic model for the data.

b) Find the height of the ball after 1.1 seconds.

c) At what time is the ball 6 ft high?