Name: _____ Date: _____

Learning Goal 4.1	Given a quadratic equation, identify the number of solutions, zeros, roots or $x-$ intercepts.

1. Determine the number of zeros of the following functions.
   a. $y = -0.07(x-3.1)^2 - 4.25$ b. $y = x^2 + 18x + 81$ c. $y = -x^2 + 4x - 1$
   d. $y = 2(x-3.1)^2$ e. $y = x^2 - 5x - 14$ f. $y = x^2 + 6x + 10$

2. The manager at a clothing store has determined that the function $R(x) = 600 - 6x^2$ models the expected weekly revenue from sweatshirts as the price changes (R is the revenue, in dollars, and x is the price change, in dollars). What price increase or decrease will result in no revenue and explain why.