# 2.2 Quadratic Functions

**Practice Problem 1:**

Find the vertex of the following quadratic.

**Practice Problem 2:**

1. Determine whether the graph has a minimum or maximum value.
2. Find the minimum or maximum value.

**Practice Problem 3:**

1. Determine whether the graph has a minimum or maximum value.
2. Find the minimum or maximum value.

**Practice Problem 4:**

Use the Leading Coefficient Test to determine the end behavior of the graphs of each of the following functions.

Part A

Part B

**Practice Problem 5:**

Show the polynomial function has a real zero between -3 and -2.

**Answers:**

1. (2, 5)
2. A) Minimum. B) (2, 984)
3. A) Maximum. B) (200, 205).
4. A) Rises to the left and the right. B) Falls to the left and rises to the right.
5. F(-3) =-42; f(-2) = 5 Yes, has real zero