MTH 261, Quiz #0, Spring 2019 Name ______

Instructions: You must show all work to receive full credit for the problems below. You may check your work with a calculator, but answers without work will receive minimal credit. Use exact answers unless the problem starts with decimals or you are specifically asked to round.

- 1. A function is given by $f(x) = -x^2 + 5$. Find the values of f(-3) and f(a + h).
- 2. Find the slope of the line containing the points (-9,2) and (3,-4).

3. Graph $f(x) = \frac{x^2-1}{x+1}$. State the domain and range in interval notation. Identify any holes, intercepts, or asymptotes.

4. Graph
$$f(x) = \begin{cases} x^2 + 2, for \ x \ge 0 \\ x^2 - 2, for \ x < 0 \end{cases}$$