Math 105 Quiz 1
§1.1-§1.3
Name: KEY
Show all work for credit. No calculators are allowed on this quiz.

1. Sketch the following functions on the same graph. Label them.
   \[ g(x) = (\sqrt{x}) + 1 \] and \[ h(x) = |x - 2| - 2 \]

Find the domain and range of \( g(x) = (\sqrt{x}) + 1 \).
   Domain: \([0, \infty)\)
   Range: \([1, \infty)\)

Find the domain and range of \( h(x) = |x - 2| - 2 \).
   Domain: \((-\infty, \infty)\)
   Range: \([-2, \infty)\)

2. Consider the following graph from \([-4, 1]\). Recall, “Where” is asking for \(x\)-intervals.

   (a) Where is the function increasing?
   \((-4, -3) \cup (-1, 1)\)

   (b) Where is the function decreasing?
   \((-3, -1)\)

   (c) Where is the function concave down?
   \((-4, -1) \cup (-1, 0)\)

   (d) Where does the function have negative output values?
   \((-1.25, 0)\)

3. Is the function from number 2. even, odd, or periodic on the interval from \([-1, 1]\)?
   Odd