1. Let \( f(x) = -\sqrt{x} \).
   a. Sketch \( y = f(x) \).
   b. Find the function \( f_1 \) so that the graph of \( y = f_1(x) \) is being shifted to the right 2 units and down 3 units from \( f \).

2. If the graph of \( f(x) = (x - 3)^2 + 2 \) is given below and is marked as the darkest graph). Then identify the remaining functions, \( y = -f(x), y = -f(-x) - 1, \) and \( y = f(-(x+2)) - 1 \), whose graphs are given below. 

3. If the graph of \( y = f(x) \) is shown below. Note that the \( x \) - intercepts are \( x = -1, 1 \) and 2; the local maximum is around \((-0.215, 2.11)\) and the local minimum is around \((1.549, -0.631)\). 

   a. Sketch the graph of \( y = -f(x) \).
   b. Sketch the graph of \( y = f(-x) \).
   c. Sketch the graph of \( y = f(x - 1) + 1 \). [hint: right one and up one from \( y = f(x) \).]
   d. Sketch the graph of \( y = 2f(x) \).

4. Let \( f(x) = \sqrt{x + 50} \).
   a. Sketch the graph of \( y = f(x) \).
   b. Find the function \( g \) so that the graph of \( y = g(x) \) is being reflected along the \( x \) - axis, shifted to the right 2 units and down 3 units from \( f \).
c. Find the domain and range for the function $g$. 