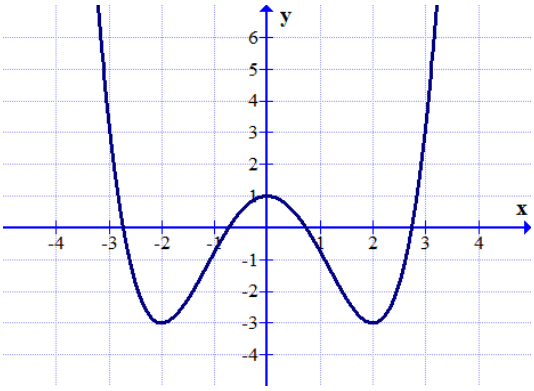
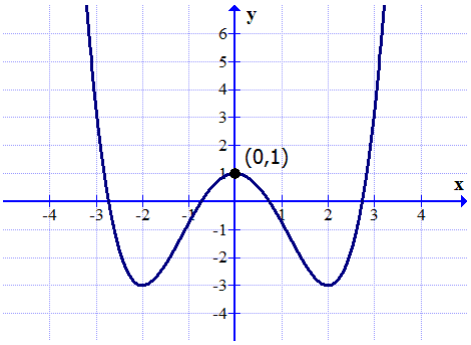
Given the following graph, evaluate f(0) and solve for f(x) = -3.




***Solution***

To evaluate f(0) means to find the output of the function when the input is 0. To do this, find the point on the graph that has an x-value of zero. This will be the place where the graph crosses the y-axis. For this function an input of 0 produces an output of 1. Therefore, f(0) = 1.




Solving f(x) = -3, means to find all input values that have an output value of -3. To do this find -3 on the y-axis and then find all points where the line y = -3 intersects the graph of f(x). The x-values of the points where y=-3 crosses the function f(x) are your solutions to f(x) = -3. For this function the solutions would be x = -2 and x = 2, f(-2) = -3 and f(2) = 3.