1. (5 pts) Use Newton’s Method to estimate $\sqrt{5}$, starting with $x_0 = 2.5$. You are allowed to use your calculator but you must identify the equation for which $\sqrt{5}$ is a root, the formulas you use to generate successive estimates, and values for the first four estimates $x_1, x_2, x_3,$ and $x_4$.

2. (5 pts) Consider the graph of $f$ shown below. Graphically illustrate how Newton’s Method generates the first two estimates, $x_1$ and $x_2$, of a root of $f(x) = 0$ with initial guess of $x_0$. 

[Graph of a function showing a root at $x_0$]