**Numerical Analysis Final Lab**

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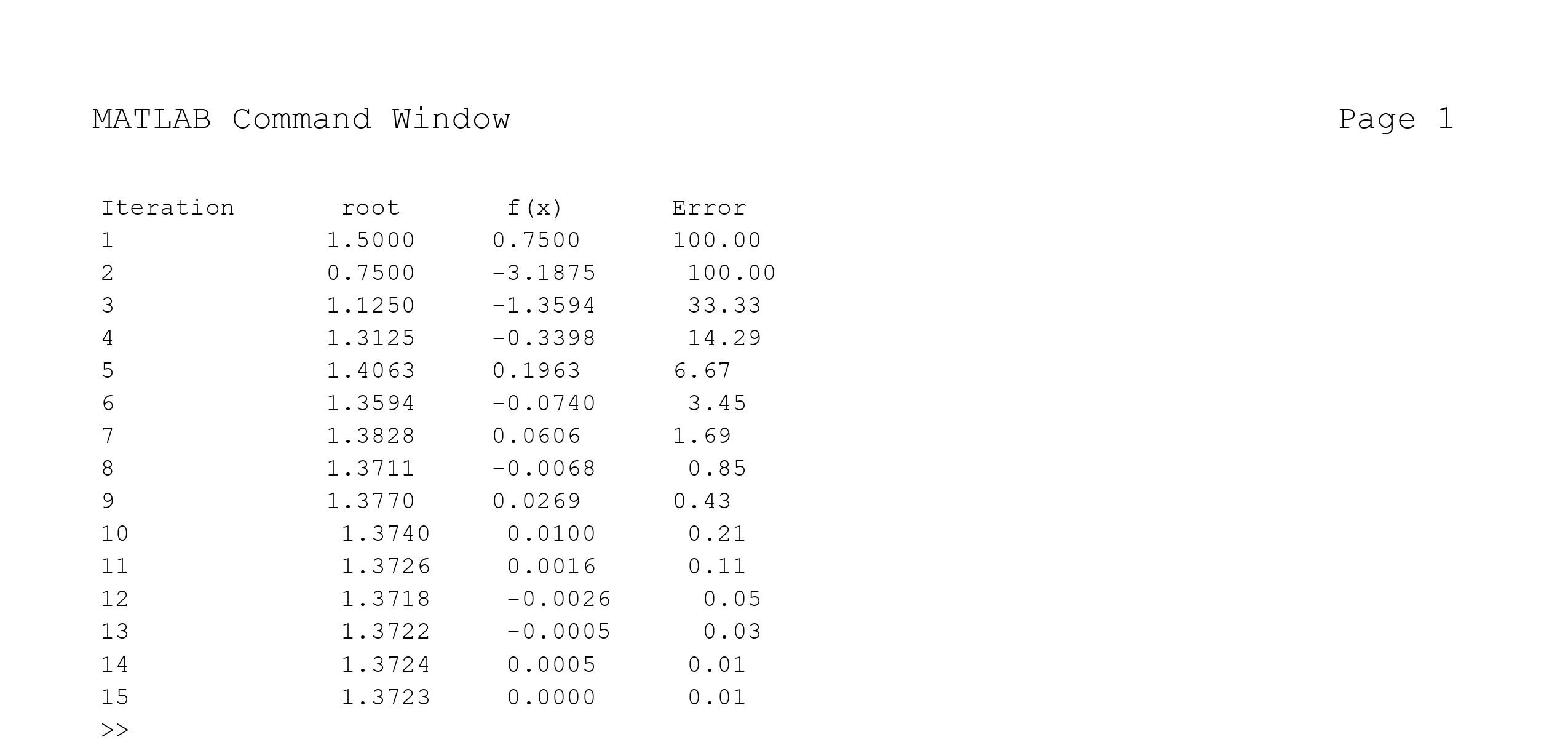
**Problem Statement**

Find the roots of the following equation by using appropriate method:

**Code**

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| clc, clear all    %y = x^2 + 3\*x - 6    f = [1 3 -6];  r = roots(f);    xi = 0;  xf = 3;  n = 15;  xold = 0;    yi = xi^2 + 3\*xi - 6;  yf = xf^2 + 3\*xf - 6;    fprintf('Iteration root f(x) Error\n')    if yi\*yf < 0  for i = 1:n  x3 = (xi+xf)/2;  y3 = x3^2 + 3\*x3 - 6;    if y3 == 0;  break  else if yi\*y3 < 0  xf = x3;  else if y3\*yf < 0  xi = x3;  end  end  end    e = abs((x3-xold)/x3)\*100;  xold = x3;    fprintf('%d %.4f %.4f %.2f\n', i, x3, y3, e)    end  else  disp("No roots between the limit")  end    a = -8:.2:5;  b = a.\*a + 3\*a - 6;    plot(a,b, "r--"); hold on;  scatter(r(1),0)  scatter(x3,0)    xlim([-6 4])  ylim([-10 10])  line([0 0], [-10 35])  line([-8 10], [0 0]) |

**Command Window**



**Graph**

