function PlotIterations(polynomialCoefficients, iterationValues)

figure;

hold on;

minIterationValue = min(iterationValues);

maxIterationValue = max(iterationValues);

plotXPadding = (maxIterationValue - minIterationValue) / 4;

minPlotX = minIterationValue - plotXPadding;

maxPlotX = maxIterationValue + plotXPadding;

xlim([minPlotX, maxPlotX]);

PlotPolynomial(polynomialCoefficients, minPlotX, maxPlotX);

PlotIterationValues(polynomialCoefficients, iterationValues);

hold off;

end

function PlotPolynomial(polynomialCoefficients, minX, maxX)

xValues = linspace(minX, maxX);

yValues = EvalPolynomial(polynomialCoefficients, xValues);

plot(xValues, yValues);

end

function PlotIterationValues(polynomialCoefficients, iterationValues)

yValues = EvalPolynomial(polynomialCoefficients, iterationValues);

scatter(iterationValues, yValues, 50, 'black');

end

function yValues = EvalPolynomial(polynomialCoefficients, xValues)

numberOfValues = length(xValues);

yValues = zeros(1, numberOfValues);

for i=1:numberOfValues

x = xValues(i);

y = Polynomial(x, polynomialCoefficients);

yValues(i) = y;

end

end