**EGN3204 — Engineering Software Tools**

**Pensacola (82151) Section, Fall 2014**

**Problem Set #10 (November 13, 2014 Lecture)**

**(Word, Matlab R2013a)**

James Davis

1. The matlab code for problems 1 is given in Figure 1 and the output for problems 1 is given in Figure 2.

%James Davis, EGN3204, Fall 2014

% MATLAB m file for problem 1, Project 12

clear all

clear console

load('davis\_exponential.mat');

[p] = polyfit(x,log(y),1);

r = exp(p(2));

s = exp(p(1));

xplot = linspace(x(1),x(end),500);

yplot = r\*(s.^xplot);

figure(1)

plot(x,y,'or',xplot,yplot,'-k')

xlabel('independent')

ylabel('dependent')

title('Plot by James Davis')

fprintf('The value of r is %f and the value of s is %f',r,s);

**Figure 1.** The matlab m file for problem 1.



The value of r is 1.2000 and the value of s is 0.850000

**Figure 2.** The selected outputs for problem

2. The matlab code for problem 2 is given in Figure 3. The selected outputs for the problem are given in Figure 4.

%James Davis, EGN3204, Fall 2014

% MATLAB m file for problem 2, Project 12

clear all

clear console

load('davis\_power.mat');

r = polyfit(log(x),log(y),1);

p = exp(r(2));

q = r(1);

xplot = linspace(x(1),x(end),500);

yplot = p\*(xplot.^q);

figure(1)

plot(x,y,'or',xplot,yplot,'-k')

xlabel('independent')

ylabel('dependent')

title('Plot by James Davis')

fprintf('The value of p is %f and the value of q is %f',p,q);

**Figure 3.** the matlab m file for problem 2.



The value of p is 1.100000 and the value of q is 2.050000

**Figure 4.** The function called in Figure 3.