**EGN3204 — Engineering Software Tools**

**Pensacola (11193) Section**

**Spring 2017**

**Problem Set #2 (18 January, 2017 Lecture)**

**MATLAB R2015a, Word 2013**

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1. MATLAB operation to determine numerical value for the two given expressions.
   1. A = ((−1.1)(−2.1)+log10(−35))/((2.7)(1.2)+(−2.35)(0.4)))

Clear all

>> a = ((-1.1)^(-2.1)+ log10(-35))/((2.7)^(1.2)+(-2.35)^(0.4))

a =

0.6466 + 0.0659i

>>

* 1. b=log­­2(−8)

Clear all

>> b = log2(-8)

b =

3.0000 + 4.5324i

>>

1. For the complex numbers c = 3 – j4, d = -3 + j3 , f = 10sqrt(2)e-j(pi)/4

Clear all

>> c= 3 - j\*4;

>> d = -3 + 3\*j;

>> f = 10\*sqrt(2)\*exp(-(pi/4)\*j);

>> g = f / c

g =

2.8000 + 0.4000i

>> h = c\* d

h =

3.0000 +21.0000i

>> k = c \* f

k =

-10.0000 -70.0000i

>>

1. Determine each of the following vectors using MATLAB.
   1. >> l = linspace(27,63,5)

l =

27 36 45 54 63

* 1. >> m = logspace(5,9,6)

m =

1.0e+09 \*

0.0001 0.0006 0.0040 0.0251 0.1585 1.0000

* 1. >> n = linspace(11,62, 7)

n =

Columns 1 through 6

11.0000 19.5000 28.0000 36.5000 45.0000 53.5000

Column 7

62.0000

>>

1. Nodal analysis of an electrical circuit leads to a system of three equations:
   1. >>A(1,1) = 4;

>>A(1,2) = -5;

>>A(1,3) = 1;

>>b(1,1) = 10 \* exp(j \* pi/2);

I am sorry, I really don’t know what I have to do for this question. I have gone through and double and triple checked the notes from last lecture and I cannot figure out how to properly implement this, even with the HINT.