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## Aaron Klapheck

```
% Quiz 1
clear, clc
date
```

ans =

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### Problem 1.

A = [0: 32: 2]	% a.	NO [0: 2: 32]	-4
B = linspace(0, 32, 8)	% b.	OK	
C = logspace(2, 5, 10)	% c.	OK	
D = [(5*B)', (2*B+13)', B']	% d.	OK	

A =

0

B =

0 4. 5714 9. 1429 13. 7143 18. 2857 22. 8571 27. 4286 32. 0000

C =

1. 0e+005 \*

Columns 1 through 9

0. 0010 0. 0022 0. 0046 0. 0100 0. 0215 0. 0464 0. 1000 0. 2154  
0. 4642

Column 10

1. 0000

D =

0	13. 0000	0
22. 8571	22. 1429	4. 5714
45. 7143	31. 2857	9. 1429
68. 5714	40. 4286	13. 7143
91. 4286	49. 5714	18. 2857
114. 2857	58. 7143	22. 8571
137. 1429	67. 8571	27. 4286
160. 0000	77. 0000	32. 0000

## Problem 2

```
X = [3, -2, 1, 6; 6, 8, -5, 7; 7, 9, 10, -8; 9, 5, 2, -4] % a.      OK
Y = X(:, 2:4) % b.      OK
V = [X(:, 1), X(:, 1), X(:, 1)] % c.      OK
Max_Values_columns = max(X) % d.      OK
C = max(X')
Max_Values_rows = C' % e.      OK
```

X =

```
3    -2     1     6
6     8    -5     7
7     9    10    -8
9     5     2    -4
```

Y =

```
-2     1     6
8    -5     7
9    10    -8
5     2    -4
```

V =

```
3     3     3
6     6     6
7     7     7
9     9     9
```

Max\_Values\_columns =

```
9     9     10     7
```

C =

```
6     8     10     9
```

Max\_Values\_rows =

```
6
8
10
9
```

## Problem 3.

```
x = [0: 0.001: 2]; % a.      OK
Number_of_Entries = length(x) % b.      OK

% Given y = 3*x^2 - 4*x - 2, find min of y and its associated input x.
y = 3*x.^2 - 4*x - 2 ;
[minimum_value_of_y, index] = min(y) % c. for the y value      OK
associated_x_value = x(index) % c. for the x value      OK

% As a safe guard, the following are x values chosen in a different range,
% just to make sure the minimum y value is -3.3333.
x = [-100: 0.01: 100];
```

```
y = 3*x.^2 - 4*x - 2 ;  
min(y)  
% The min y value is the same.
```

```
Number_of_Entries =  
    2001
```

```
min_value_of_y =  
    -3.3333
```

```
index =  
    668
```

```
associated_x_value =  
    0.6670
```

```
ans =  
    -3.3333
```