

Quiz 0

Finished by 18:10 on 4/19

Create one m file and change the filename to F7xxxxxxx_quiz0.m. Type the main code in the m-file to accomplish the following tasks. For each problem, use “fprintf(1,)” and/or “display(....)” to printout the non-graphic answers on the console screen with proper labels, such as

```
Prob 1-1:  
The first element is 3  
Prob 2:  
The answer is 2.71828  
>> |
```

For those problems requiring plots, remember to include “figure()” to open a new window for the new plot. And don’t forget the semicolon ‘;’ at the end of each statement.

1. (1) Create a 10x10 matrix A, where $A_{ij} = i*(i-j)$, and print the elements of the 3rd column of the matrix.
(2) Create a 10x1 vector B, and let $B_j = 3*j$.
(3) Calculate $A^T B$ and print the result
2. Print out the numbers that is a multiple of 126 but not 16 within the range of {2000, 4000}
3. Plot the parabola of the univariate quadratic function $f(x) = 3x^2 - 6x + 9$ for $-5 \leq x \leq 9$
4. The parametric equation of a ellipse can be expressed by
$$x(\theta) = 3 \cos \theta - 2; y(\theta) = 4 \sin \theta + 3.$$

Plot the ellipse. Make sure the aspect ratio of the ellipse is set properly.