MATLAB ASSIGNMENT - 1

ANUBHAV AGRAWAL

14 A

CSE SEM-2

300102219015

//////////////////////////////////////////////////////////

1) ----------------------------------------------------------------------

A = [2 , 9 , 0 , 0 ; 0 , 4 , 1 , 4 ; 7 , 5 , 5 , 1 ; 7 , 8 , 7 , 4]

b = [-1 ; 6 ; 0 ; 9]

c = [3 , -2 , 4 , -5]

A =

2 9 0 0

0 4 1 4

7 5 5 1

7 8 7 4

b =

-1

6

0

9

c =

3 -2 4 -5

2) ----------------------------------------------------------------------

t = [1:10]

x = t.\*sin(t)

y = (t-1)/(t+1)

z = (sin(t.^2))/(t.^2)

t =

1 2 3 4 5 6 7 8 9 10

x =

0.8415 1.8186 0.4234 -3.0272 -4.7946 -1.6765 4.5989 7.9149 3.7091 -5.4402

y =

0.7426

z = -0.0052

3) ----------------------------------------------------------------------

pq = (2^5)/((2^5) - 1); , qr = (1- 2^(-5))^(-1) ; , pq == qr

((3 \* (sqrt(5)-1) /( (sqrt(5)+1)^2) )- 1)

r = pi^(1/3) - 1 ; , area = pi\*r\*r

ans =

logical

1

ans =

-0.6459

area =

0.6781

4) ----------------------------------------------------------------------

exp(3) , log(exp(3)) , log10(exp(3)) , log10(10^5)

exp(pi \* sqrt(163))

syms x , eqn = 3^x == 17 ; , S = solve(eqn , x) ; , S

ans =

20.0855

ans =

3

ans =

1.3029

ans =

5

ans =

2.6254e+17

S =

log(17)/log(3)

5) ----------------------------------------------------------------------

sin(pi/6) , cos(pi) , tan(pi/2)

sin(pi/6)\* sin(pi/6) + cos(pi/6)\*cos(pi/6)

ans =

0.5000

ans =

-1

ans =

1.6331e+16

ans =

1

6) ----------------------------------------------------------------------

M = randi([2 , 20] , 5 , 5)

M(5 , :) = [] ; , M(: , 5) = []

N = M(1:3 , 1:3)

N(3 , :) = 4 ; , N(: , 2) = 4

M =

17 3 4 4 14

19 7 20 10 2

4 12 20 19 18

19 20 11 17 19

14 20 17 20 14

M =

17 3 4 4

19 7 20 10

4 12 20 19

19 20 11 17

N =

17 3 4

19 7 20

4 12 20

N =

17 4 4

19 4 20

4 4 4

7) ----------------------------------------------------------------------

sum(1:100)

ans =

5050

8) ----------------------------------------------------------------------

marks = [25 , 30 , 23 , 40 , 27]

newmarks = marks +5

marks =

25 30 23 40 27

newmarks =

30 35 28 45 32

9) ----------------------------------------------------------------------

vec = linspace(0 , 2\*pi , 100)

vec =

Columns 1 through 14

0 0.0635 0.1269 0.1904 0.2539 0.3173 0.3808 0.4443 0.5077 0.5712 0.6347 0.6981 0.7616 0.8251

Columns 15 through 28

0.8885 0.9520 1.0155 1.0789 1.1424 1.2059 1.2693 1.3328 1.3963 1.4597 1.5232 1.5867 1.6501 1.7136

Columns 29 through 42

1.7771 1.8405 1.9040 1.9675 2.0309 2.0944 2.1579 2.2213 2.2848 2.3483 2.4117 2.4752 2.5387 2.6021

Columns 43 through 56

2.6656 2.7291 2.7925 2.8560 2.9195 2.9829 3.0464 3.1099 3.1733 3.2368 3.3003 3.3637 3.4272 3.4907

Columns 57 through 70

3.5541 3.6176 3.6811 3.7445 3.8080 3.8715 3.9349 3.9984 4.0619 4.1253 4.1888 4.2523 4.3157 4.3792

Columns 71 through 84

4.4427 4.5061 4.5696 4.6331 4.6965 4.7600 4.8235 4.8869 4.9504 5.0139 5.0773 5.1408 5.2043 5.2677

Columns 85 through 98

5.3312 5.3947 5.4581 5.5216 5.5851 5.6485 5.7120 5.7755 5.8389 5.9024 5.9659 6.0293 6.0928 6.1563

Columns 99 through 100

6.2197 6.2832

10)---------------------------------------------------------------------

K = zeros(10);

K(: , 1:2:10) = 2

K =

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0

2 0 2 0 2 0 2 0 2 0