Math Lab 2

formatcompact

%MAT 275 MATHLAB Assignment #2

%Exercise 1

row1=[1,4,2];row2=[2,5,8];row3=[3,6,9];A=[row1;row2;row3];

A =

1 4 2

2 5 8

3 6 9

row1=[1,2,3];row2=[4,5,6];row3=[7,8,9];B=[row1;row2;row3];

B =

1 2 3

4 5 6

7 8 9

row1=[4];row2=[23];row3=[27];b=[row1;row2;row3]

b =

4

23

27

row1=[4,3,2];c=row1;

c =

4 3 2

row1=[1];row2=[2];row3=[3];d=[row1;row2;row3];

d =

1

2

3

%Part A

A\*B;

ans =

31 38 45

78 93 108

90 108 126

B\*A;

ans =

14 32 45

32 77 102

50 122 159

c\*B;

ans =

30 39 48

A\*d;

ans =

15

36

42

%Part B

C=[A B];

C =

1 4 2 1 2 3

2 5 8 4 5 6

3 6 9 7 8 9

D=[B;c];

D =

1 2 3

4 5 6

7 8 9

4 3 2

%Part C

x=A\b

x =

2

-1

3

%Part D

A(2,3)=0;

A =

1 4 2

2 5 0

3 6 9

%Part E

A(3,:);

ans =

3 6 9

%Part F

B(3,:)=[];

B =

1 2 3

4 5 6

%Exercise 2

%Part A

function C = num1( a,r,n );

C=a;

for e=0:n;

R=r.^e;

C=C+(a\*R);

end

C

end

num1(3,1/2,10);

C =

8.9971

ans =

8.9971

%Part B

function SUM = num2( a,r,n )

e=0:n-1;

R=r.^e;

SUM=sum(R\*a);

End

num2(3,1/2,10);

ans =

5.9941

%Exercise 3

%Part A

c=1

for k=1:2:19;

c=c\*k;

end

c

%Part B

prod(1:2:19);

ans =

654729075

%Exercise 4

z=[];

v=1;

value=2^v;

while value<1000;

z=[z value]

v=v+1;

value = 2^v

end

z

z =

2

value =

4

z =

2 4

value =

8

z =

2 4 8

value =

16

z =

2 4 8 16

value =

32

z =

2 4 8 16 32

value =

64

z =

2 4 8 16 32 64

value =

128

z =

2 4 8 16 32 64 128

value =

256

z =

2 4 8 16 32 64 128 256

value =

512

z =

2 4 8 16 32 64 128 256 512

value =

1024

z =

2 4 8 16 32 64 128 256 512

%Exercise 5

function [ c ] = num3( z )

%UNTITLED10 Summary of this function goes here

% Detailed explanation goes here

if z==10

disp('the function is undefined at z=10')

elseif z <= 3

c=z^2+1;

elseif 3<z<=5

c=exp(z);

elseif z>5

c=z/(z-10);

end

num3( 1 );

ans =

2

num3( 4 );

ans =

54.5982

num3( 7 );

ans =

1.0966e+003

num3( 10 );

the function is undefined at z = 10