**MATLAB 1**

**BASIC COMMANDS IN MATLAB**

**NAME**: SANTHOSH KUMAR M

**REGISTER NUMBER**:21BAI1336

BASIC ARITHMETIC FUNCTIONS

7\*9+65/3

ans =  
  
 84.6667

a=1;

a+1

ans =  
  
 2

sin(45)

ans =  
  
 0.8509

tan(90)

ans =  
  
 -1.9952

exp(2)

ans =  
  
 7.3891

log(3)

ans =  
  
 1.0986

sqrt(81)

ans =  
  
 9

abs(9)

ans =  
  
 9

abs(-45)

ans =  
  
 45

sign(78)

ans =  
  
 1

a=[1 2 3; 4 5 6; 7 8 9]

a =  
  
 1 2 3  
 4 5 6  
 7 8 9

det(a)

ans =  
  
 -9.5162e-16

a'

ans =  
  
 1 4 7  
 2 5 8  
 3 6 9

inv(a)  
   
  
ans =  
  
 1.0e+16 \*  
  
 0.3153 -0.6305 0.3153  
 -0.6305 1.2610 -0.6305  
 0.3153 -0.6305 0.3153

p=a\*inv(a)

   
  
p =  
  
 0 0 0  
 -4 0 0  
 -4 0 0

c=pi

c =  
  
 3.1416

d=a.\*a

d =  
  
 1 4 9  
 16 25 36  
 49 64 81

a(2,2)

ans =  
  
 5

rank(a)

ans =  
  
 2

format short

inv(a)

 ans =  
  
 1.0e+16 \*  
  
 0.3153 -0.6305 0.3153  
 -0.6305 1.2610 -0.6305  
 0.3153 -0.6305 0.3153

a(3,2)

ans =  
  
 8

acos(30)

ans =  
  
 0.0000 + 4.0941i

acos(0)

ans =  
  
 1.5708

log10(4)

ans =  
  
 0.6021

zeros(3,1)

ans =  
  
 0  
 0  
 0

a=[1 2 3 4 5]

a =  
  
 1 2 3 4 5

b=diag(a)

b =  
  
 1 0 0 0 0  
 0 2 0 0 0  
 0 0 3 0 0  
 0 0 0 4 0  
 0 0 0 0 5

rank(b)

ans =  
  
 5

rand(3,2)

ans =  
  
 0.8147 0.9134  
 0.9058 0.6324  
 0.1270 0.0975

a=[1 2 3;3 3 4;2 3 3]

a =  
  
 1 2 3  
 3 3 4  
 2 3 3

b=[1;1;2]

b =  
  
 1  
 1  
 2

x=inv(a)\*b

x =  
  
 -0.5000  
 1.5000  
 -0.5000

x=a\b

x =  
  
 -0.5000  
 1.5000  
 -0.5000