```
clear all
close all
clc
```

Problem 4

```
A1 = [4 3; 3 6];
A2 = [1 2; 3 0];
A3 = [1 2; 0 1];

linf_A1 = norm(A1,Inf)
l1_A1 = norm(A1,1)
l2_A1 = norm(A1,2)
lF_A1 = norm(A1,'fro')

linf_A2 = norm(A2,Inf)
l1_A2 = norm(A2,1)
l2_A2 = norm(A2,2)
lF_A2 = norm(A2,'fro')

linf_A3 = norm(A3,Inf)
l1_A3 = norm(A3,1)
l2_A3 = norm(A3,2)
lF_A3 = norm(A3,'fro')


linf_A1 =

     9


l1_A1 =

     9


l2_A1 =

    8.1623


lF_A1 =

    8.3666


linf_A2 =

     3


l1_A2 =
```

4

l2_A2 =

    3.2566

lF_A2 =

    3.7417

linf_A3 =

    3

l1_A3 =

    3

l2_A3 =

    2.4142

lF_A3 =

    2.4495

Problem 29

```
A = [1 4; 2 8; 3 12];
A_range = colspace(sym(A))
A_null = null(A,'r')
A_ad_range = colspace(sym(A.'))
A_ad_null = null(A.','r')
```

A_range =

 1
 2
 3

A_null =

    -4

```
     1


A_ad_range =

 1
 4


A_ad_null =

    -2    -3
     1     0
     0     1
```

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