I.

>> NUM = [1.8]

NUM = 1.8000

>> DEN = [0.0008 0.02006 2.7015]

DEN = 0.0008 0.0201 2.7015

>> [A,B,C,D] = tf2ss(NUM,DEN)

A =

1.0e+03 \* -0.0251 -3.3769

0.0010 0

B = 1

0

C = 0 2250

D = 0

II.

>> A =[1 0;1 -1]

A =

1 0

1 -1

>> B = [1 0;0 1]

B =

1 0

0 1

>> C = [2 0;1 1]

C =

2 0

1 1

>> D = [2 0;0 0]

D =

2 0

0 0

>> eig(A)

ans =

-1

1

>> lambda =[-1+(10\*eps);-1-(10\*eps)]

lambda =

-1.0000

-1.0000

>> format long

>> lambda =[-1+(10\*eps);-1-(10\*eps)]

lambda =

-0.999999999999998

-1.000000000000002

>> [K] = place(A,B,lambda)

K =

1.999999999999998 0

1.000000000000000 0.000000000000002