```
>> testscript
----------------------------------------------------------------
Data:
 A=
  Columns 1 through 9

   -0.6946         0         0         0         0         0         0         0         0
         0   -0.4619         0         0         0         0         0         0         0
         0         0    0.8836         0         0         0         0         0         0
         0         0         0    0.4359         0         0         0         0         0
         0         0         0         0    0.8967         0         0         0         0
         0         0         0         0         0    0.5047         0         0         0
         0         0         0         0         0         0   -0.4009         0         0
         0         0         0         0         0         0         0   -0.5138         0
         0         0         0         0         0         0         0         0    0.7964
         0         0         0         0         0         0         0         0    0.7665
         0         0         0         0         0         0         0    1.7447         0
         0         0         0         0         0         0   -1.1605         0         0
         0         0         0         0         0    2.3774         0         0         0
         0         0         0         0    1.5261         0         0         0         0
         0         0         0    0.1685         0         0         0         0         0
         0         0   -0.3012         0         0         0         0         0         0
         0   -0.6987         0         0         0         0         0         0         0
    0.8328         0         0         0         0         0         0         0         0

  Columns 10 through 18

         0         0         0         0         0         0         0         0         0
         0         0         0         0         0         0         0         0    0.3891
         0         0         0         0         0         0         0   -1.1560         0
         0         0         0         0         0         0    0.0397         0         0
         0         0         0         0         0   -0.4506         0         0         0
         0         0         0         0    0.1092         0         0         0         0
         0         0         0   -0.2506         0         0         0         0         0
         0         0   -0.1899         0         0         0         0         0         0
         0   -1.0329         0         0         0         0         0         0         0
   -0.9945         0         0         0         0         0         0         0         0
         0    1.1867         0         0         0         0         0         0         0
         0         0    0.7907         0         0         0         0         0         0
         0         0         0    0.2877         0         0         0         0         0
         0         0         0         0    0.0032         0         0         0         0
         0         0         0         0         0    0.3656         0         0         0
         0         0         0         0         0         0    3.5267         0         0
         0         0         0         0         0         0         0   -0.1124         0
         0         0         0         0         0         0         0         0   -1.5566
         0         0         0         0         0         0         0         0         0

  Column 19

    0.8540
         0
         0
         0
         0
         0
         0
         0
         0
```

```
            0
            0
            0
            0
            0
            0
            0
            0
            0
       1.9151

b =
       0.1594
      -0.0727
      -0.2724
       0.4757
       0.4461
       0.6140
      -0.6514
      -0.7037
      -0.2365
      -0.9945
       1.9532
       2.5354
      -0.8728
       2.3806
       1.8917
       3.6952
      -0.4136
      -2.2552
       2.7479

Result for
     GENP      GEPP
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000

Error in Xnp= 8.0705e-16
Error in Xpp= 1.1672e-16
Epsilon*||A||*||A^1||= 2.0829e-14
******************************************************************
Question 2.c)
```

```
Data:
 A=
  Columns 1 through 9

     0.0000         0         0         0         0         0         0         0         0
          0   -0.4619         0         0         0         0         0         0         0
          0         0    0.8836         0         0         0         0         0         0
          0         0         0    0.4359         0         0         0         0         0
          0         0         0         0    0.8967         0         0         0         0
          0         0         0         0         0    0.5047         0         0         0
          0         0         0         0         0         0   -0.4009         0         0
          0         0         0         0         0         0         0   -0.5138         0
          0         0         0         0         0         0         0         0    0.7964
          0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0    0.7665
          0         0         0         0         0         0         0    1.7447         0
          0         0         0         0         0         0   -1.1605         0         0
          0         0         0         0         0    2.3774         0         0         0
          0         0         0         0    1.5261         0         0         0         0
          0         0         0    0.1685         0         0         0         0         0
          0         0   -0.3012         0         0         0         0         0         0
          0   -0.6987         0         0         0         0         0         0         0
     0.8328         0         0         0         0         0         0         0         0

  Columns 10 through 18

          0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0    0.3891
          0         0         0         0         0         0         0   -1.1560         0
          0         0         0         0         0         0    0.0397         0         0
          0         0         0         0         0   -0.4506         0         0         0
          0         0         0         0    0.1092         0         0         0         0
          0         0         0   -0.2506         0         0         0         0         0
          0         0   -0.1899         0         0         0         0         0         0
          0   -1.0329         0         0         0         0         0         0         0
    -0.9945         0         0         0         0         0         0         0         0
          0    1.1867         0         0         0         0         0         0         0
          0         0    0.7907         0         0         0         0         0         0
          0         0         0    0.2877         0         0         0         0         0
          0         0         0         0    0.0032         0         0         0         0
          0         0         0         0         0    0.3656         0         0         0
          0         0         0         0         0         0    3.5267         0         0
          0         0         0         0         0         0         0   -0.1124         0
          0         0         0         0         0         0         0         0   -1.5566
          0         0         0         0         0         0         0         0         0

  Column 19

     0.8540
          0
          0
          0
          0
          0
          0
          0
          0
          0
          0
          0
```

```
          0
          0
          0
          0
          0
          0
          0
     1.9151

b =
     0.8540
    -0.0727
    -0.2724
     0.4757
     0.4461
     0.6140
    -0.6514
    -0.7037
    -0.2365
    -0.9945
     1.9532
     2.5354
    -0.8728
     2.3806
     1.8917
     3.6952
    -0.4136
    -2.2552
     2.7479

Result for
     GENP      GEPP
     0.9992    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
     1.0000    1.0000
```

Xnp error: 0.00018337
Xpp error: 1.0502e−16
Epsilon*||A||*||A^1||= 2.0829e−14
****
Question 2.d)
Data:
 A=

```
Columns 1 through 9

  0.0000        0        0        0        0        0        0        0        0
       0  -0.4619        0        0        0        0        0        0        0
       0        0   0.8836        0        0        0        0        0        0
       0        0        0   0.4359        0        0        0        0        0
       0        0        0        0   0.8967        0        0        0        0
       0        0        0        0        0   0.5047        0        0        0
       0        0        0        0        0        0  -0.4009        0        0
       0        0        0        0        0        0        0  -0.5138        0
       0        0        0        0        0        0        0        0   0.7964
       0        0        0        0        0        0        0        0   0.7665
       0        0        0        0        0        0        0   1.7447        0
       0        0        0        0        0        0  -1.1605        0        0
       0        0        0        0        0   2.3774        0        0        0
       0        0        0        0   1.5261        0        0        0        0
       0        0        0   0.1685        0        0        0        0        0
       0        0  -0.3012        0        0        0        0        0        0
       0  -0.6987        0        0        0        0        0        0        0
  0.0000        0        0        0        0        0        0        0        0

Columns 10 through 18

       0        0        0        0        0        0        0        0        0
       0        0        0        0        0        0        0        0   0.3891
       0        0        0        0        0        0        0  -1.1560        0
       0        0        0        0        0        0   0.0397        0        0
       0        0        0        0        0  -0.4506        0        0        0
       0        0        0        0   0.1092        0        0        0        0
       0        0        0  -0.2506        0        0        0        0        0
       0        0  -0.1899        0        0        0        0        0        0
       0  -1.0329        0        0        0        0        0        0        0
 -0.9945        0        0        0        0        0        0        0        0
       0   1.1867        0        0        0        0        0        0        0
       0        0   0.7907        0        0        0        0        0        0
       0        0        0   0.2877        0        0        0        0        0
       0        0        0        0   0.0032        0        0        0        0
       0        0        0        0        0   0.3656        0        0        0
       0        0        0        0        0        0   3.5267        0        0
       0        0        0        0        0        0        0  -0.1124        0
       0        0        0        0        0        0        0        0  -1.5566
       0        0        0        0        0        0        0        0        0

Column 19

  0.8540
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
       0
```

```
         0
         0
         0
         0
         0
    1.9151

b =
    0.8540
   -0.0727
   -0.2724
    0.4757
    0.4461
    0.6140
   -0.6514
   -0.7037
   -0.2365
   -0.9945
    1.9532
    2.5354
   -0.8728
    2.3806
    1.8917
    3.6952
   -0.4136
   -2.2552
    1.9151

Result for
     GENP       GEPP
    0.9992     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000
    1.0000     1.0000

Xnp error: 0.00018337
Xpp error: 1.3395e-10
Epsilon*||A||*||A^1||= 1.9252e-08
>>
```