>> D=[ 21.89 45.1 220.4 1491 19;

22.29 50.9 259.5 1504 19.41;

19.63 53.3 256.3 1438 20.93;

22.85 53.6 249.3 1551 21.78;

33.77 54.6 352.3 1646 23.68;

39.18 61.1 329.1 1349 26.01;

30.58 61.9 219.6 1224 27.52;

26.3 57.9 234.8 1382 26.89;

30.7 64.8 237.4 1553 26.85;

32.1 66.2 245.8 1296.1 27.23;

30 66.7 229.2 1365 25.46;

30.8 72.2 233.9 1492.5 23.88;

30.8 76.5 234.2 1634.9 22.62;

32.6 81.7 347 1561 23.72;

35.4 89.8 468.1 1509.7 24.5;

36.6 97.8 555 1195.8 24.5;

38.6 100 418 1321.9 24.98;

42.2 106.3 525.2 1545.4 25.58;

47.9 111.1 620.7 1499.5 27.18;

58.2 107.8 588.6 1469 28.72;

52 109.6 444.4 2084.5 29;

51.2 119.7 427.8 2378.5 26.67;

59.5 129.8 727.1 2057.5 25.33;

77.3 129.3 877.6 1352.5 34.06;

64.2 117.8 556.6 1171.4 39.79;

69.6 129.8 780.6 1547.6 44.49;

66.8 137.1 750.7 1989.8 51.35;

66.5 145.2 709.8 2023.3 54.42;

98.3 152.5 935.7 1749.2 61.01;

101.4 147.1 940.9 1298.5 70.87]

D =

1.0e+03 \*

0.0219 0.0451 0.2204 1.4910 0.0190

0.0223 0.0509 0.2595 1.5040 0.0194

0.0196 0.0533 0.2563 1.4380 0.0209

0.0229 0.0536 0.2493 1.5510 0.0218

0.0338 0.0546 0.3523 1.6460 0.0237

0.0392 0.0611 0.3291 1.3490 0.0260

0.0306 0.0619 0.2196 1.2240 0.0275

0.0263 0.0579 0.2348 1.3820 0.0269

0.0307 0.0648 0.2374 1.5530 0.0269

0.0321 0.0662 0.2458 1.2961 0.0272

0.0300 0.0667 0.2292 1.3650 0.0255

0.0308 0.0722 0.2339 1.4925 0.0239

0.0308 0.0765 0.2342 1.6349 0.0226

0.0326 0.0817 0.3470 1.5610 0.0237

0.0354 0.0898 0.4681 1.5097 0.0245

0.0366 0.0978 0.5550 1.1958 0.0245

0.0386 0.1000 0.4180 1.3219 0.0250

0.0422 0.1063 0.5252 1.5454 0.0256

0.0479 0.1111 0.6207 1.4995 0.0272

0.0582 0.1078 0.5886 1.4690 0.0287

0.0520 0.1096 0.4444 2.0845 0.0290

0.0512 0.1197 0.4278 2.3785 0.0267

0.0595 0.1298 0.7271 2.0575 0.0253

0.0773 0.1293 0.8776 1.3525 0.0341

0.0642 0.1178 0.5566 1.1714 0.0398

0.0696 0.1298 0.7806 1.5476 0.0445

0.0668 0.1371 0.7507 1.9898 0.0514

0.0665 0.1452 0.7098 2.0233 0.0544

0.0983 0.1525 0.9357 1.7492 0.0610

0.1014 0.1471 0.9409 1.2985 0.0709

>> D=sort(D,2,'ascend')

D =

1.0e+03 \*

0.0190 0.0219 0.0451 0.2204 1.4910

0.0194 0.0223 0.0509 0.2595 1.5040

0.0196 0.0209 0.0533 0.2563 1.4380

0.0218 0.0229 0.0536 0.2493 1.5510

0.0237 0.0338 0.0546 0.3523 1.6460

0.0260 0.0392 0.0611 0.3291 1.3490

0.0275 0.0306 0.0619 0.2196 1.2240

0.0263 0.0269 0.0579 0.2348 1.3820

0.0269 0.0307 0.0648 0.2374 1.5530

0.0272 0.0321 0.0662 0.2458 1.2961

0.0255 0.0300 0.0667 0.2292 1.3650

0.0239 0.0308 0.0722 0.2339 1.4925

0.0226 0.0308 0.0765 0.2342 1.6349

0.0237 0.0326 0.0817 0.3470 1.5610

0.0245 0.0354 0.0898 0.4681 1.5097

0.0245 0.0366 0.0978 0.5550 1.1958

0.0250 0.0386 0.1000 0.4180 1.3219

0.0256 0.0422 0.1063 0.5252 1.5454

0.0272 0.0479 0.1111 0.6207 1.4995

0.0287 0.0582 0.1078 0.5886 1.4690

0.0290 0.0520 0.1096 0.4444 2.0845

0.0267 0.0512 0.1197 0.4278 2.3785

0.0253 0.0595 0.1298 0.7271 2.0575

0.0341 0.0773 0.1293 0.8776 1.3525

0.0398 0.0642 0.1178 0.5566 1.1714

0.0445 0.0696 0.1298 0.7806 1.5476

0.0514 0.0668 0.1371 0.7507 1.9898

0.0544 0.0665 0.1452 0.7098 2.0233

0.0610 0.0983 0.1525 0.9357 1.7492

0.0709 0.1014 0.1471 0.9409 1.2985

>> data1=D(1:14,:)

data1 =

1.0e+03 \*

0.0190 0.0219 0.0451 0.2204 1.4910

0.0194 0.0223 0.0509 0.2595 1.5040

0.0196 0.0209 0.0533 0.2563 1.4380

0.0218 0.0229 0.0536 0.2493 1.5510

0.0237 0.0338 0.0546 0.3523 1.6460

0.0260 0.0392 0.0611 0.3291 1.3490

0.0275 0.0306 0.0619 0.2196 1.2240

0.0263 0.0269 0.0579 0.2348 1.3820

0.0269 0.0307 0.0648 0.2374 1.5530

0.0272 0.0321 0.0662 0.2458 1.2961

0.0255 0.0300 0.0667 0.2292 1.3650

0.0239 0.0308 0.0722 0.2339 1.4925

0.0226 0.0308 0.0765 0.2342 1.6349

0.0237 0.0326 0.0817 0.3470 1.5610

>> data2=D(17:30,:)

data2 =

1.0e+03 \*

0.0250 0.0386 0.1000 0.4180 1.3219

0.0256 0.0422 0.1063 0.5252 1.5454

0.0272 0.0479 0.1111 0.6207 1.4995

0.0287 0.0582 0.1078 0.5886 1.4690

0.0290 0.0520 0.1096 0.4444 2.0845

0.0267 0.0512 0.1197 0.4278 2.3785

0.0253 0.0595 0.1298 0.7271 2.0575

0.0341 0.0773 0.1293 0.8776 1.3525

0.0398 0.0642 0.1178 0.5566 1.1714

0.0445 0.0696 0.1298 0.7806 1.5476

0.0514 0.0668 0.1371 0.7507 1.9898

0.0544 0.0665 0.1452 0.7098 2.0233

0.0610 0.0983 0.1525 0.9357 1.7492

0.0709 0.1014 0.1471 0.9409 1.2985

>> %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

>>

>> % FOR MODEL1

>>

>> Y1=data1(:,1)

Y1 =

19.0000

19.4100

19.6300

21.7800

23.6800

26.0100

27.5200

26.3000

26.8500

27.2300

25.4600

23.8800

22.6200

23.7200

>> n=14

n =

14

>> k=5

k =

5

>> X1=[ones(n,1) (data1(:,2)) (data1(:,3)) (data1(:,4)) (data1(:,5))]

X1 =

1.0e+03 \*

0.0010 0.0219 0.0451 0.2204 1.4910

0.0010 0.0223 0.0509 0.2595 1.5040

0.0010 0.0209 0.0533 0.2563 1.4380

0.0010 0.0229 0.0536 0.2493 1.5510

0.0010 0.0338 0.0546 0.3523 1.6460

0.0010 0.0392 0.0611 0.3291 1.3490

0.0010 0.0306 0.0619 0.2196 1.2240

0.0010 0.0269 0.0579 0.2348 1.3820

0.0010 0.0307 0.0648 0.2374 1.5530

0.0010 0.0321 0.0662 0.2458 1.2961

0.0010 0.0300 0.0667 0.2292 1.3650

0.0010 0.0308 0.0722 0.2339 1.4925

0.0010 0.0308 0.0765 0.2342 1.6349

0.0010 0.0326 0.0817 0.3470 1.5610

>> A1=X1'\*X1

A1 =

1.0e+07 \*

0.0000 0.0000 0.0001 0.0004 0.0020

0.0000 0.0012 0.0026 0.0107 0.0592

0.0001 0.0026 0.0055 0.0227 0.1269

0.0004 0.0107 0.0227 0.0979 0.5365

0.0020 0.0592 0.1269 0.5365 3.0188

>> B1=X1'\*Y1

B1 =

1.0e+05 \*

0.0033

0.0979

0.2080

0.8682

4.8502

>> Beta1=inv(A1)\*(B1)

Beta1 =

25.1654

0.4526

0.0180

-0.0202

-0.0071

>> Ymean1=mean(Y1)

Ymean1 =

23.7921

>> e1=Y1-X1\*(Beta1)

e1 =

-1.9084

-0.9036

-0.6420

1.2908

0.9779

-1.8230

0.4745

2.4189

2.3809

0.4567

-0.2197

-1.2653

-1.5907

0.3531

>> SigmaSq1=(e1'\*e1)/(n-k)

SigmaSq1 =

3.0082

>> Betavar1=SigmaSq1\*inv(X1'\*X1)

Betavar1 =

44.2484 -0.3887 -0.0024 0.0178 -0.0255

-0.3887 0.0226 -0.0062 -0.0014 0.0003

-0.0024 -0.0062 0.0040 0.0003 -0.0001

0.0178 -0.0014 0.0003 0.0002 -0.0000

-0.0255 0.0003 -0.0001 -0.0000 0.0000

>> TSS1=Y1'\*Y1-n\*(Ymean1^2)

TSS1 =

113.9956

>> ESS1=Beta1'\*X1'\*Y1-n\*Ymean1^2

ESS1 =

86.9214

>> RSS1=TSS1-ESS1

RSS1 =

27.0742

>> Rsq1=ESS1/TSS1

Rsq1 =

0.7625

>> Rbarsq1=1-((n-1)/(n-k))\*(1-Rsq1)

Rbarsq1 =

0.6569

>> %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

>>

>> % FOR MODEL 2

>>

>>