>>

>> **X = [1 1051.8 1503.6 3.6 508 5.9 5873;**

**1 1078.8 1486.7 3.5 6.7 4.5 7852;**

**1 1075.3 1434.8 5.0 8.4 4.2 8189;**

**1 1107.5 2035.6 6.0 6.2 4.2 7497;**

**1 1171.1 2360.8 5.6 5.4 4.9 8534;**

**1 1235.0 2043.9 4.9 5.9 5.0 8688;**

**1 1217.8 1331.9 5.6 9.4 4.1 7270;**

**1 1202.3 1160.0 8.5 9.4 3.4 5020;**

**1 1271.0 1535.0 7.7 7.2 4.2 6035;**

**1 1332.7 1961.8 7.0 6.6 4.5 7425;**

**1 1399.2 2009.3 6.0 7.6 3.9 9400;**

**1 1431.6 1721.9 6.0 10.6 4.4 9350;**

**1 1480.7 1298.0 7.2 14.9 3.9 6540;**

**1 1510.3 1100.0 7.6 16.6 3.1 7675;**

**1 1492.2 1039.0 9.2 17.5 0.6 7419;**

**1 1535.4 1200.0 8.8 16.0 1.5 7923]**

X =

1.0e+03 \*

0.0010 1.0518 1.5036 0.0036 0.5080 0.0059 5.8730

0.0010 1.0788 1.4867 0.0035 0.0067 0.0045 7.8520

0.0010 1.0753 1.4348 0.0050 0.0084 0.0042 8.1890

0.0010 1.1075 2.0356 0.0060 0.0062 0.0042 7.4970

0.0010 1.1711 2.3608 0.0056 0.0054 0.0049 8.5340

0.0010 1.2350 2.0439 0.0049 0.0059 0.0050 8.6880

0.0010 1.2178 1.3319 0.0056 0.0094 0.0041 7.2700

0.0010 1.2023 1.1600 0.0085 0.0094 0.0034 5.0200

0.0010 1.2710 1.5350 0.0077 0.0072 0.0042 6.0350

0.0010 1.3327 1.9618 0.0070 0.0066 0.0045 7.4250

0.0010 1.3992 2.0093 0.0060 0.0076 0.0039 9.4000

0.0010 1.4316 1.7219 0.0060 0.0106 0.0044 9.3500

0.0010 1.4807 1.2980 0.0072 0.0149 0.0039 6.5400

0.0010 1.5103 1.1000 0.0076 0.0166 0.0031 7.6750

0.0010 1.4922 1.0390 0.0092 0.0175 0.0006 7.4190

0.0010 1.5354 1.2000 0.0088 0.0160 0.0015 7.9230

>> **Y=X(:,7)**

Y =

5873

7852

8189

7497

8534

8688

7270

5020

6035

7425

9400

9350

6540

7675

7419

7923

>> **X=X(:,1:6)**

X =

1.0e+03 \*

0.0010 1.0518 1.5036 0.0036 0.5080 0.0059

0.0010 1.0788 1.4867 0.0035 0.0067 0.0045

0.0010 1.0753 1.4348 0.0050 0.0084 0.0042

0.0010 1.1075 2.0356 0.0060 0.0062 0.0042

0.0010 1.1711 2.3608 0.0056 0.0054 0.0049

0.0010 1.2350 2.0439 0.0049 0.0059 0.0050

0.0010 1.2178 1.3319 0.0056 0.0094 0.0041

0.0010 1.2023 1.1600 0.0085 0.0094 0.0034

0.0010 1.2710 1.5350 0.0077 0.0072 0.0042

0.0010 1.3327 1.9618 0.0070 0.0066 0.0045

0.0010 1.3992 2.0093 0.0060 0.0076 0.0039

0.0010 1.4316 1.7219 0.0060 0.0106 0.0044

0.0010 1.4807 1.2980 0.0072 0.0149 0.0039

0.0010 1.5103 1.1000 0.0076 0.0166 0.0031

0.0010 1.4922 1.0390 0.0092 0.0175 0.0006

0.0010 1.5354 1.2000 0.0088 0.0160 0.0015

>> **n=16**

n =

16

**>> k=6**

k =

6

>> **b=inv(X'\*X)\*X'\*Y**

b =

1.0e+03 \*

6.6645

0.0050

0.0019

-0.8712

-0.0028

-0.7359

>> **e=Y-X\*b**

e =

-0.8079

-644.8015

898.6693

-226.6459

41.0213

-59.6753

-86.6298

77.5242

-75.3780

-192.6597

49.8171

758.0472

-805.7767

320.4084

-172.9347

119.8220

>> **S=(e'\*e)/(n-k)**

S =

2.7096e+05

>> **Var=S\*inv(X'\*X)**

Var =

1.0e+06 \*

3.9194 -0.0015 -0.0001 -0.1148 -0.0004 -0.2600

-0.0015 0.0000 -0.0000 -0.0001 0.0000 0.0001

-0.0001 -0.0000 0.0000 0.0000 0.0000 -0.0001

-0.1148 -0.0001 0.0000 0.0219 0.0000 0.0156

-0.0004 0.0000 0.0000 0.0000 0.0000 -0.0001

-0.2600 0.0001 -0.0001 0.0156 -0.0001 0.0448

>> **SE=sqrt(diag(Var))**

SE =

1.0e+03 \*

1.9798

0.0012

0.0005

0.1479

0.0013

0.2116

>> **Ymean=mean(Y)**

Ymean =

7.5431e+03

>> **bvar=S\*inv(X'\*X)**

bvar =

1.0e+06 \*

3.9194 -0.0015 -0.0001 -0.1148 -0.0004 -0.2600

-0.0015 0.0000 -0.0000 -0.0001 0.0000 0.0001

-0.0001 -0.0000 0.0000 0.0000 0.0000 -0.0001

-0.1148 -0.0001 0.0000 0.0219 0.0000 0.0156

-0.0004 0.0000 0.0000 0.0000 0.0000 -0.0001

-0.2600 0.0001 -0.0001 0.0156 -0.0001 0.0448

>> **TSS=Y'\*Y-n\*Ymean^2**

TSS =

2.2222e+07

>> **RSS=b'\*X'\*Y-n\*Ymean^2**

RSS =

1.9512e+07

ESS=TSS-RSS

RSS =

2.7096e+06

>> MSS\_R=RSS/5

MSS\_R =

3.9025e+06

>> MSS\_E=ESS/10

MSS\_E =

2.7096e+05

**>> Rsq=ESS/TSS**

Rsq =

0.8781

>> **Rbarsq=1-((n-1)/(n-k))\*(1-Rsq)**

Rbarsq =

0.8171

>> **F=((n-k)/(k-1))\*(Rsq/(1-Rsq))**

F =

14.4022

>> **t=(b-0)/SE\*(b)**

t =

1.0e+04 \*

2.2435

0.0017

0.0006

-0.2933

-0.0009

-0.2477

>> **t1=b(2,1)/SE(2,1)**

t1 =

4.2181

>> **t2=b(3,1)/SE(3,1)**

t2 =

4.0528

>> **t3=b(4,1)/SE(4,1)**

t3 =

-5.8896

>> **t4=b(5,1)/SE(5,1)**

t4 =

-2.1322

>> **t5=b(6,1)/SE(6,1)**

t5 =

-3.4770