Unit 10 SAS Code

/\*Unit 10 SAS CODE \*/

/\* 10.3.2 Assumptions\*/

**data** assumptions;

input X Quadratic IncVar OK;

datalines;

1209.470715 5.871097504 0.69842195

1067.021348 6.66301461 12.79444836

951.2078161 10.89171975 38.33127011

963.1324971 15.60511064 7.163917143

888.9561516 17.59391565 19.64998705

820.2469794 24.38046989 21.12594582

741.6959721 27.50877094 44.99122131

662.3803347 29.10885226 42.61951632

621.2251986 40.86858443 22.28412238

624.3101105 41.04504503 47.24196327

569.6749648 46.05819787 48.30623352

582.0516459 44.77525952 53.7365279

437.799488 51.4159594 49.08051413

467.5546079 55.75606843 54.64298059

430.6151231 64.94376947 62.12800338

379.7467312 63.01648754 57.47377453

249.1658679 68.44613062 67.15506217

295.6785352 72.33839272 68.84145483

332.3088278 76.94930744 80.2470488

240.5111279 79.62919959 82.42859906

217.2963529 84.50926278 89.72723803

161.2495425 88.32856085 77.51132925

236.7269397 92.14938184 106.4660788

189.1719592 88.88890707 108.5927505

159.8509256 102.4304693 90.63662181

127.4577904 101.5984335 101.6473333

-66.09924737 107.6532349 95.30636699

-3.839629191 115.5635996 118.5303533

124.3852348 111.0114169 111.3064859

4.756494987 122.9208164 122.3139505

28.21089245 130.9612863 130.8246395

15.96319571 131.3752298 136.9241926

51.62289364 136.9741012 154.1686605

36.41151071 133.037052 132.5599408

59.7084777 133.4527861 122.9239014

-25.99080799 142.1193109 140.3174526

-40.60517803 146.8903115 146.9023745

29.6248375 151.3331337 142.7318575

27.5814281 160.8869676 159.591766

127.6704287 158.4429241 157.1245648

49.88653683 164.8681365 174.7325506

119.6249654 169.875369 161.0447965

68.86143634 172.7710965 186.0134655

77.49896746 178.8665337 152.4408549

130.9753532 173.22259 172.8674798

87.90061319 178.3823625 170.9101083

184.0391824 199.1933053 178.0483161

230.6976789 198.4567414 192.9043238

198.7136739 194.9123735 222.4380192

245.3895549 193.8313954 195.6492393

345.6359697 203.6518465 210.7739843

294.723778 204.0774583 206.9329748

290.7630734 219.5889689 203.7316367

346.7671497 223.1412674 212.4799233

393.6136491 220.1365604 214.1969997

457.3830402 225.7996525 217.4865827

477.0713314 238.8959432 216.6365973

500.8949387 230.1129938 218.8861649

568.7875354 235.2781918 230.3322162

603.1870611 244.2264318 237.2664237

720.5558834 246.9663988 246.1132078

738.2752617 257.3819912 247.5753647

761.6180652 254.4439844 246.5240922

808.9143529 252.1209621 261.6012417

888.6789516 262.2140757 261.102007

882.7534937 262.8385748 278.2041578

1081.909659 268.1872693 254.7019072

1037.710593 276.5452486 268.7379154

1201.274062 273.5679426 279.8349002

;

**proc** **print** data = Assumptions;

**run**;

/\* curved trend \*/

**proc** **glm** data = Assumptions plots = all;

model Quadratic = X;

**run**;

/\* increasing Sd \*/

**proc** **glm** data = Assumptions plots = all;

model IncVar = X;

**run**;

/\* Assumptions Met \*/

**proc** **glm** data = Assumptions plots = all;

model OK = X;

**run**;

/\* Tuna Problem \*/

**proc** **print** data = Tuna;

**run**;

**proc** **reg** data = Tuna;

model Length = Age;

**run**;

/\* 10.4.2 ANOVA Toy Example \*/

**data** ToyExample;

input score level;

datalines;

3 1

5 1

7 1

10 2

12 2

14 2

20 3

22 3

24 3

;

**proc** **print** data = ToyExample;

**run**;

**proc** **glm** data = ToyExample;

class level;

model score = level;

**run**;

**proc** **glm** data = ToyExample;

model score = level / solution;

**run**;

/\* 10.4.3 ANOVA on Study Data \*/

**data** StudyTime;

input ExamScore StudyTime;

datalines;

34 1

56 1

45 2

70 2

55 2

68 3

67 4

79 4

45 4

89 6

95 7

78 7

94 8

;

**proc** **print** data = StudyTime;

**run**;

**proc** **reg** data = StudyTime;

model ExamScore = StudyTime;

**run**;

**proc** **glm** data = StudyTime;

model ExamScore = StudyTime / solution;

**run**;

/\* Confidence Interval for Study Data \*/

**proc** **reg** data = StudyTime;

model ExamScore = StudyTime / clm;

**run**;

**proc** **glm** data = StudyTime;

model ExamScore = StudyTime / solution clm;

**run**;

/\* Prediction Interval for Study Data \*/

**proc** **reg** data = StudyTime;

model ExamScore = StudyTime / cli;

**run**;

**proc** **glm** data = StudyTime;

model ExamScore = StudyTime / solution cli;

**run**;

**data** StudyTime;

input ExamScore StudyTime;

datalines;

34 1

56 1

45 2

70 2

55 2

68 3

67 4

79 4

45 4

89 6

95 7

78 7

94 8

. 5

;

**proc** **glm** data = StudyTime;

model ExamScore = StudyTime / solution clm;

**run**;