> getwd()

[1] "/Users/lizhaocheng"

> setwd("/Users/lizhaocheng/Desktop/Zhaocheng-s/S")

Error in setwd("/Users/lizhaocheng/Desktop/Zhaocheng-s/S") :

cannot change working directory

> setwd("/Users/lizhaocheng/Desktop/Zhaocheng-s/STAT353/ass/A2/")

> data1=read.table(file="data-table-B4.prn",header=TRUE)

> data2=read.table(file="data-table-B7.prn",header=TRUE)

> attach(data1)

The following object is masked \_by\_ .GlobalEnv:

y

> attach(data2)

The following object is masked \_by\_ .GlobalEnv:

y

The following objects are masked from data1:

x1, x2, x3, x4, x5, y

> print(data1)

y x1 x2 x3 x4 x5 x6 x7 x8 x9

1 29.5 5.0208 1.0 3.5310 1.500 2.0 7 4 62 0

2 27.9 4.5429 1.0 2.2750 1.175 1.0 6 3 40 0

3 25.9 4.5573 1.0 4.0500 1.232 1.0 6 3 54 0

4 29.9 5.0597 1.0 4.4550 1.121 1.0 6 3 42 0

5 29.9 3.8910 1.0 4.4550 0.988 1.0 6 3 56 0

6 30.9 5.8980 1.0 5.8500 1.240 1.0 7 3 51 1

7 28.9 5.6039 1.0 9.5200 1.501 0.0 6 3 32 0

8 35.9 5.8282 1.0 6.4350 1.225 2.0 6 3 32 0

9 31.5 5.3003 1.0 4.9883 1.552 1.0 6 3 30 0

10 31.0 6.2712 1.0 5.5200 0.975 1.0 5 2 30 0

11 30.9 5.9592 1.0 6.6660 1.121 2.0 6 3 32 0

12 30.0 5.0500 1.0 5.0000 1.020 0.0 5 2 46 1

13 36.9 8.2464 1.5 5.1500 1.664 2.0 8 4 50 0

14 41.9 6.6969 1.5 6.9020 1.488 1.5 7 3 22 1

15 40.5 7.7841 1.5 7.1020 1.376 1.0 6 3 17 0

16 43.9 9.0384 1.0 7.8000 1.500 1.5 7 3 23 0

17 37.5 5.9894 1.0 5.5200 1.256 2.0 6 3 40 1

18 37.9 7.5422 1.5 5.0000 1.690 1.0 6 3 22 0

19 44.5 8.7951 1.5 9.8900 1.820 2.0 8 4 50 1

20 37.9 6.0831 1.5 6.7265 1.652 1.0 6 3 44 0

21 38.9 8.3607 1.5 9.1500 1.777 2.0 8 4 48 1

22 36.9 8.1400 1.0 8.0000 1.504 2.0 7 3 3 0

23 45.8 9.1416 1.5 7.3262 1.831 1.5 8 4 31 0

24 25.9 4.9176 1.0 3.4720 0.998 1.0 7 4 42 0

> print(data2)

y x1 x2 x3 x4 x5

1 63 415 25 5 40 1.28

2 21 550 25 5 40 4.05

3 36 415 95 5 40 4.05

4 99 550 95 5 40 1.28

5 24 415 25 15 40 4.05

6 66 550 25 15 40 1.28

7 71 415 95 15 40 1.28

8 54 550 95 15 40 4.05

9 23 415 25 5 60 4.05

10 74 550 25 5 60 1.28

11 80 415 95 5 60 1.28

12 33 550 95 5 60 4.05

13 63 415 25 15 60 1.28

14 21 550 25 15 60 4.05

15 44 415 95 15 60 4.05

16 96 550 95 15 60 1.28

> fit1=lm(y~x1+x2+x3+x4+x5+x6+x7+x8+x9,data1)

> fit2=lm(y~x1+x2+x3+x4+x5,data2)

> anova(fit1)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 73.1525 6.238e-07 \*\*\*

x2 1 29.18 29.18 3.3551 0.08836 .

x3 1 4.71 4.71 0.5416 0.47391

x4 1 0.03 0.03 0.0032 0.95537

x5 1 8.78 8.78 1.0091 0.33216

x6 1 13.03 13.03 1.4982 0.24115

x7 1 9.14 9.14 1.0515 0.32254

x8 1 0.64 0.64 0.0741 0.78943

x9 1 5.63 5.63 0.6478 0.43435

Residuals 14 121.75 8.70

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit5=lm(y~x2+x3+x4+x5+x6+x7+x8+x9,data1)

> anova(fit5)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x2 1 421.27 421.27 41.5395 1.104e-05 \*\*\*

x3 1 125.96 125.96 12.4200 0.003067 \*\*

x4 1 12.23 12.23 1.2056 0.289521

x5 1 46.16 46.16 4.5517 0.049810 \*

x6 1 4.62 4.62 0.4553 0.510116

x7 1 50.39 50.39 4.9687 0.041523 \*

x8 1 15.13 15.13 1.4919 0.240765

x9 1 1.18 1.18 0.1163 0.737784

Residuals 15 152.12 10.14

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit6=lm(y~x1+x3+x4+x5+x6+x7+x8+x9,data1)

> anova(fit6)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 65.9030 7.186e-07 \*\*\*

x3 1 3.29 3.29 0.3405 0.5682

x4 1 6.87 6.87 0.7122 0.4120

x5 1 4.17 4.17 0.4320 0.5210

x6 1 12.56 12.56 1.3013 0.2719

x7 1 4.41 4.41 0.4574 0.5092

x8 1 0.07 0.07 0.0076 0.9317

x9 1 16.72 16.72 1.7317 0.2079

Residuals 15 144.79 9.65

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit7=lm(y~x1+x2+x4+x5+x6+x7+x8+x9,data1)

> anova(fit7)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 77.8630 2.523e-07 \*\*\*

x2 1 29.18 29.18 3.5711 0.07828 .

x4 1 0.06 0.06 0.0074 0.93272

x5 1 6.02 6.02 0.7363 0.40437

x6 1 14.59 14.59 1.7852 0.20142

x7 1 11.61 11.61 1.4207 0.25180

x8 1 0.66 0.66 0.0807 0.78028

x9 1 8.23 8.23 1.0077 0.33138

Residuals 15 122.55 8.17

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit8=lm(y~x1+x2+x3+x5+x6+x7+x8+x9,data1)

> anova(fit8)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 76.2530 2.881e-07 \*\*\*

x2 1 29.18 29.18 3.4973 0.08111 .

x3 1 4.71 4.71 0.5646 0.46405

x5 1 8.45 8.45 1.0134 0.33006

x6 1 12.72 12.72 1.5249 0.23587

x7 1 7.28 7.28 0.8725 0.36507

x8 1 0.73 0.73 0.0877 0.77120

x9 1 4.68 4.68 0.5606 0.46559

Residuals 15 125.14 8.34

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit9=lm(y~x1+x2+x3+x4+x6+x7+x8+x9,data1)

> anova(fit9)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 68.0088 5.912e-07 \*\*\*

x2 1 29.18 29.18 3.1192 0.09772 .

x3 1 4.71 4.71 0.5035 0.48883

x4 1 0.03 0.03 0.0030 0.95692

x6 1 3.81 3.81 0.4069 0.53318

x7 1 3.91 3.91 0.4179 0.52774

x8 1 0.76 0.76 0.0815 0.77912

x9 1 10.19 10.19 1.0891 0.31320

Residuals 15 140.31 9.35

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit10=lm(y~x1+x2+x3+x4+x5+x7+x8+x9,data1)

> anova(fit10)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 78.2116 2.453e-07 \*\*\*

x2 1 29.18 29.18 3.5871 0.07768 .

x3 1 4.71 4.71 0.5791 0.45847

x4 1 0.03 0.03 0.0035 0.95380

x5 1 8.78 8.78 1.0789 0.31539

x7 1 21.89 21.89 2.6910 0.12171

x8 1 0.42 0.42 0.0511 0.82416

x9 1 5.89 5.89 0.7240 0.40821

Residuals 15 122.01 8.13

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit11=lm(y~x1+x2+x3+x4+x5+x6+x8+x9,data1)

> anova(fit11)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 77.4331 2.614e-07 \*\*\*

x2 1 29.18 29.18 3.5514 0.07902 .

x3 1 4.71 4.71 0.5733 0.46067

x4 1 0.03 0.03 0.0034 0.95403

x5 1 8.78 8.78 1.0682 0.31773

x6 1 13.03 13.03 1.5859 0.22716

x8 1 1.04 1.04 0.1269 0.72667

x9 1 12.90 12.90 1.5696 0.22944

Residuals 15 123.23 8.22

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit12=lm(y~x1+x2+x3+x4+x5+x6+x7+x9,data1)

> anova(fit12)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 76.6797 2.781e-07 \*\*\*

x2 1 29.18 29.18 3.5168 0.08035 .

x3 1 4.71 4.71 0.5677 0.46282

x4 1 0.03 0.03 0.0034 0.95426

x5 1 8.78 8.78 1.0578 0.32002

x6 1 13.03 13.03 1.5705 0.22932

x7 1 9.14 9.14 1.1022 0.31040

x9 1 3.58 3.58 0.4318 0.52108

Residuals 15 124.44 8.30

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit13=lm(y~x1+x2+x3+x4+x5+x6+x7+x8,data1)

> anova(fit13)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 74.9113 3.224e-07 \*\*\*

x2 1 29.18 29.18 3.4357 0.08357 .

x3 1 4.71 4.71 0.5546 0.46793

x4 1 0.03 0.03 0.0033 0.95479

x5 1 8.78 8.78 1.0334 0.32548

x6 1 13.03 13.03 1.5342 0.23451

x7 1 9.14 9.14 1.0768 0.31585

x8 1 0.64 0.64 0.0759 0.78672

Residuals 15 127.38 8.49

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> pv = 1-pf(3.5026,1,14)

> pv

[1] 0.08231579

> pv = 1-pf(2.6620,1,14)

> pv

[1] 0.1250538

> pv = 1-pf(0.1023,1,14)

> pv

[1] 0.7538101

> pv = 1-pf(0.4013,1,14)

> pv

[1] 0.536631

> pv = 1-pf(2.5942,1,14)

> pv

[1] 0.1295646

> pv = 1-pf(0.0391,1,14)

> pv

[1] 0.846093

> pv = 1-pf(0.1805,1,14)

> pv

[1] 0.6774011

> pv = 1-pf(0.3208,1,14)

> pv

[1] 0.5800942

> fit14=lm(y~x1+x2+x5+x6+x7+x8,data1)

> anove(fit14)

Error: could not find function "anove"

> anova(fit14)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 79.9450 7.777e-08 \*\*\*

x2 1 29.18 29.18 3.6666 0.0725 .

x5 1 6.08 6.08 0.7635 0.3944

x6 1 12.63 12.63 1.5876 0.2247

x7 1 8.94 8.94 1.1235 0.3040

x8 1 0.79 0.79 0.0992 0.7566

Residuals 17 135.28 7.96

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit15=lm(y~x1+x2+x3+x5+x6+x7+x8,data1)

> anova(fit15)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 636.16 636.16 78.4061 1.451e-07 \*\*\*

x2 1 29.18 29.18 3.5960 0.07612 .

x3 1 4.71 4.71 0.5805 0.45719

x5 1 8.45 8.45 1.0420 0.32255

x6 1 12.72 12.72 1.5680 0.22850

x7 1 7.28 7.28 0.8971 0.35765

x8 1 0.73 0.73 0.0902 0.76784

Residuals 16 129.82 8.11

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> summary(fit2)

Call:

lm(formula = y ~ x1 + x2 + x3 + x4 + x5, data = data2)

Residuals:

Min 1Q Median 3Q Max

-12.250 -4.438 0.125 5.250 9.500

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.208e+01 1.889e+01 2.757 0.020218 \*

x1 5.556e-02 2.987e-02 1.860 0.092544 .

x2 2.821e-01 5.761e-02 4.897 0.000625 \*\*\*

x3 1.250e-01 4.033e-01 0.310 0.762949

x4 1.776e-16 2.016e-01 0.000 1.000000

x5 -1.606e+01 1.456e+00 -11.035 6.4e-07 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 8.065 on 10 degrees of freedom

Multiple R-squared: 0.9372, Adjusted R-squared: 0.9058

F-statistic: 29.86 on 5 and 10 DF, p-value: 1.055e-05

> anova(fit2)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 225.0 225.0 3.4589 0.0925445 .

x2 1 1560.2 1560.2 23.9854 0.0006254 \*\*\*

x3 1 6.2 6.2 0.0961 0.7629488

x4 1 0.0 0.0 0.0000 1.0000000

x5 1 7921.0 7921.0 121.7679 6.401e-07 \*\*\*

Residuals 10 650.5 65.1

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit16=lm(y~x2+x3+x4+x5,data2)

> anova(fit16)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x2 1 1560.2 1560.2 19.6034 0.001016 \*\*

x3 1 6.2 6.2 0.0785 0.784504

x4 1 0.0 0.0 0.0000 1.000000

x5 1 7921.0 7921.0 99.5214 7.572e-07 \*\*\*

Residuals 11 875.5 79.6

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit17=lm(y~x1+x3+x4+x5,data2)

> anova(fit17)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 225.0 225.0 1.1195 0.3127

x3 1 6.3 6.3 0.0311 0.8632

x4 1 0.0 0.0 0.0000 1.0000

x5 1 7921.0 7921.0 39.4124 6.02e-05 \*\*\*

Residuals 11 2210.8 201.0

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit18=lm(y~x1+x2+x4+x5,data2)

> anova(fit18)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 225.0 225.0 3.7686 0.0782713 .

x2 1 1560.2 1560.2 26.1329 0.0003376 \*\*\*

x4 1 0.0 0.0 0.0000 1.0000000

x5 1 7921.0 7921.0 132.6700 1.771e-07 \*\*\*

Residuals 11 656.8 59.7

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit19=lm(y~x1+x2+x3+x5,data2)

> anova(fit19)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 225.0 225.0 3.8048 0.077041 .

x2 1 1560.2 1560.2 26.3839 0.000325 \*\*\*

x3 1 6.2 6.2 0.1057 0.751207

x5 1 7921.0 7921.0 133.9447 1.686e-07 \*\*\*

Residuals 11 650.5 59.1

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

> fit20=lm(y~x1+x2+x3+x4,data2)

> anova(fit20)

Analysis of Variance Table

Response: y

Df Sum Sq Mean Sq F value Pr(>F)

x1 1 225.0 225.00 0.2887 0.6017

x2 1 1560.2 1560.25 2.0023 0.1847

x3 1 6.2 6.25 0.0080 0.9302

x4 1 0.0 0.00 0.0000 1.0000

Residuals 11 8571.5 779.23

> pv =1-pf(3.4588,1,10)

> pv

[1] 0.09254766

> pv =1-pf(23.9831,1,10)

> pv

[1] 0.0006256677

> pv =1-pf(0.2337,1,10)

> pv

[1] 0.639204

> pv =1-pf(0.1384,1,10)

> pv

[1] 0.7176391

> pv =1-pf(121.9062,1,10)

> pv

[1] 6.367464e-07

> summary(fit2)

Call:

lm(formula = y ~ x1 + x2 + x3 + x4 + x5, data = data2)

Residuals:

Min 1Q Median 3Q Max

-12.250 -4.438 0.125 5.250 9.500

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.208e+01 1.889e+01 2.757 0.020218 \*

x1 5.556e-02 2.987e-02 1.860 0.092544 .

x2 2.821e-01 5.761e-02 4.897 0.000625 \*\*\*

x3 1.250e-01 4.033e-01 0.310 0.762949

x4 1.776e-16 2.016e-01 0.000 1.000000

x5 -1.606e+01 1.456e+00 -11.035 6.4e-07 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 8.065 on 10 degrees of freedom

Multiple R-squared: 0.9372, Adjusted R-squared: 0.9058

F-statistic: 29.86 on 5 and 10 DF, p-value: 1.055e-05

> fit21=lm(y~x2+x5,data2)

> summary(fit21)

Call:

lm(formula = y ~ x2 + x5, data = data2)

Residuals:

Min 1Q Median 3Q Max

-15.375 -4.188 -0.875 3.438 12.625

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 80.13461 5.69146 14.080 3.01e-09 \*\*\*

x2 0.28214 0.05883 4.796 0.000349 \*\*\*

x5 -16.06498 1.48659 -10.807 7.26e-08 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 8.236 on 13 degrees of freedom

Multiple R-squared: 0.9149, Adjusted R-squared: 0.9018

F-statistic: 69.89 on 2 and 13 DF, p-value: 1.107e-07

> summary(fit2)

Call:

lm(formula = y ~ x1 + x2 + x3 + x4 + x5, data = data2)

Residuals:

Min 1Q Median 3Q Max

-12.250 -4.438 0.125 5.250 9.500

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.208e+01 1.889e+01 2.757 0.020218 \*

x1 5.556e-02 2.987e-02 1.860 0.092544 .

x2 2.821e-01 5.761e-02 4.897 0.000625 \*\*\*

x3 1.250e-01 4.033e-01 0.310 0.762949

x4 1.776e-16 2.016e-01 0.000 1.000000

x5 -1.606e+01 1.456e+00 -11.035 6.4e-07 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 8.065 on 10 degrees of freedom

Multiple R-squared: 0.9372, Adjusted R-squared: 0.9058

F-statistic: 29.86 on 5 and 10 DF, p-value: 1.055e-05

> summary.lm(fit2)

Call:

lm(formula = y ~ x1 + x2 + x3 + x4 + x5, data = data2)

Residuals:

Min 1Q Median 3Q Max

-12.250 -4.438 0.125 5.250 9.500

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.208e+01 1.889e+01 2.757 0.020218 \*

x1 5.556e-02 2.987e-02 1.860 0.092544 .

x2 2.821e-01 5.761e-02 4.897 0.000625 \*\*\*

x3 1.250e-01 4.033e-01 0.310 0.762949

x4 1.776e-16 2.016e-01 0.000 1.000000

x5 -1.606e+01 1.456e+00 -11.035 6.4e-07 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 8.065 on 10 degrees of freedom

Multiple R-squared: 0.9372, Adjusted R-squared: 0.9058

F-statistic: 29.86 on 5 and 10 DF, p-value: 1.055e-05

> summary.lm(fit21)

Call:

lm(formula = y ~ x2 + x5, data = data2)

Residuals:

Min 1Q Median 3Q Max

-15.375 -4.188 -0.875 3.438 12.625

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 80.13461 5.69146 14.080 3.01e-09 \*\*\*

x2 0.28214 0.05883 4.796 0.000349 \*\*\*

x5 -16.06498 1.48659 -10.807 7.26e-08 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 8.236 on 13 degrees of freedom

Multiple R-squared: 0.9149, Adjusted R-squared: 0.9018

F-statistic: 69.89 on 2 and 13 DF, p-value: 1.107e-07

> lower1=(2.821e-01)-qt(0.975,22)\*5.761e-02

> upper1=(2.821e-01)+qt(0.975,22)\*5.761e-02

> cat("The 95% CI for beta2 in fit2 is:","(",lower1,upper1,")")

The 95% CI for beta2 in fit2 is: ( 0.1626242 0.4015758 )

> lower2=(0.28214)-qt(0.975,22)\*0.05883

> upper2=(0.28214)+qt(0.975,22)\*0.05883

> cat("The 95% CI for beta2 in fit21 is:","(",lower2,upper2,")")

The 95% CI for beta2 in fit21 is: ( 0.160134 0.404146 )