James Hahn

STAT1221

Homework 4 – MINITAB output

**Chapter 8**

**1b)**

Regression Analysis: SBP versus Age

Analysis of Variance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
| Regression | 1 | 3862 | 3861.63 | 45.18 | 0.000 |
| Age | 1 | 3862 | 3861.63 | 45.18 | 0.000 |
| Error | 30 | 2564 | 85.48 |  |  |
| Lack-of-Fit | 20 | 1491 | 74.53 | 0.69 | 0.767 |
| Pure Error | 10 | 1074 | 107.37 |  |  |
| Total | 31 | 6426 |  |  |  |

Model Summary

|  |  |  |  |
| --- | --- | --- | --- |
| S | R-sq | R-sq(adj) | R-sq(pred) |
| 9.24543 | 60.09% | 58.76% | 54.31% |

Regression Analysis: SBP versus Age, SMK

Analysis of Variance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
| Regression | 2 | 4689.7 | 2344.84 | 39.16 | 0.000 |
| Age | 1 | 4296.6 | 4296.59 | 71.76 | 0.000 |
| SMK | 1 | 828.1 | 828.05 | 13.83 | 0.001 |
| Error | 29 | 1736.3 | 59.87 |  |  |
| Lack-of-Fit | 25 | 1294.3 | 51.77 | 0.47 | 0.894 |
| Pure Error | 4 | 442.0 | 110.50 |  |  |
| Total | 31 | 6426.0 |  |  |  |

Model Summary

|  |  |  |  |
| --- | --- | --- | --- |
| S | R-sq | R-sq(adj) | R-sq(pred) |
| 7.73769 | 72.98% | 71.12% | 67.37% |

Regression Analysis: SBP versus Age, SMK, QUET

Analysis of Variance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
| Regression | 3 | 4889.8 | 1629.94 | 29.71 | 0.000 |
| Age | 1 | 769.5 | 769.46 | 14.03 | 0.001 |
| SMK | 1 | 769.2 | 769.23 | 14.02 | 0.001 |
| QUET | 1 | 200.1 | 200.14 | 3.65 | 0.066 |
| Error | 28 | 1536.1 | 54.86 |  |  |
| Total | 31 | 6426.0 |  |  |  |

Model Summary

|  |  |  |  |
| --- | --- | --- | --- |
| S | R-sq | R-sq(adj) | R-sq(pred) |
| 7.40691 | 76.09% | 73.53% | 66.22% |