**Dr. Burtner Regression Analysis Template**

***Problem Statement: A study was conducted on the amount of converted sugar in a certain process at various temperatures. The data are shown below. Use Excel to estimate the linear regression line.***

|  |  |
| --- | --- |
| temperature code (x) | sugar produced (y) |
| 1.0 | 8.1 |
| 1.1 | 7.8 |
| 1.2 | 8.5 |
| 1.3 | 9.8 |
| 1.4 | 9.5 |
| 1.5 | 8.9 |
| 1.6 | 8.6 |
| 1.7 | 10.2 |
| 1.8 | 9.3 |
| 1.9 | 9.2 |
| 2.0 | 10.5 |
| 2.1 | 10.1 |
| 2.2 | 10.3 |
| 2.3 | 9.8 |

***Response variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Predictor variable(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Hypotheses:***

H0:

H1:

***Summary Output (Include regression statistics, ANOVA Table and coefficient table)***

***What is the regression equation?***

***Is the regression significant?***

***Problem Statement: A study was conducted on the amount of converted sugar in a certain process at various temperatures and humidity. The data are shown below. Use Excel to estimate the linear regression line.***

|  |  |  |
| --- | --- | --- |
| humidity code | temperature code | sugar produced |
| 3.1 | 1.0 | 8.1 |
| 3.3 | 1.1 | 7.8 |
| 3.5 | 1.2 | 8.5 |
| 3.7 | 1.3 | 9.8 |
| 3.9 | 1.4 | 9.5 |
| 2.9 | 1.5 | 8.9 |
| 4.3 | 1.6 | 8.6 |
| 2.5 | 1.7 | 10.2 |
| 4.7 | 1.8 | 9.3 |
| 3.9 | 1.9 | 9.2 |
| 5.1 | 2.0 | 10.5 |
| 5.3 | 2.1 | 10.1 |
| 2.6 | 2.2 | 10.3 |
| 2.9 | 2.3 | 9.8 |

***Response variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Predictor variable(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Hypotheses:***

H0:

H1:

***Summary Output (Include regression statistics, ANOVA Table and coefficient table)***

***What is the regression equation?***

***Is the regression significant?***

***Make a brief recommendation to management based on the results of the two studies.***

***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***