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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Objective:** |   |   |   |  |  |  |  |  |  |  |  |  |  |
| **The team determined that to confirm the validity of their screening experiment they should compare**  |  |  |
| **the test score results for some students that were at both the high setting and low setting within the last**  |  |  |
| **three years. This would allow them to compare the impact of the factors for individual students.** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Instructions for you:** |   |  |  |  |  |  |  |  |  |  |  |
| **For each of the three factors for which data is provided:** |  |  |  |  |  |  |  |  |
|  **a. Write a null and alternative hypothesis statement about the impact of the factor on student test scores.** |  |  |
|  **b. Test each of the hypotheses at 90% confidence level. Note: you *should* know the tool to use. If you are**  |  |
|  **struggling deciding which analysis tool to use contact your instructor for guidance.** **There is paired data. And, we want to see which of the three (style, community involvement, or a two-parent home) has moved the average test scores the most. There is also a mention of a hypothesis test and a degree of confidence sought after.**  |  |  |  |
|  **c. Based on the results of steps a. and b., determine whether or not each of three factors have a significant**  |  |
|  **impact on student test scores.** |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| **Data:** |  |   |   |   |   |   |   |  |  |  |  |  |  |
|  | **STYLE** |  | **COMM INVOLV** |  | **2 PARENT HOME** |  |  |
|  | **Student** | **Lecture** | **Groups** |  | **Student** | **No** | **Yes** |  | **Student** | **No** | **Yes** |  |  |
|  | **1** | **67** | **71** |  | **1** | **67** | **75** |  | **1** | **68** | **74** |  |  |
|  | **2** | **75** | **77** |  | **2** | **73** | **81** |  | **2** | **71** | **78** |  |  |
|  | **3** | **54** | **52** |  | **3** | **58** | **63** |  | **3** | **54** | **57** |  |  |
|  | **4** | **81** | **79** |  | **4** | **81** | **84** |  | **4** | **85** | **81** |  |  |
|  | **5** | **72** | **76** |  | **5** | **69** | **64** |  | **5** | **71** | **75** |  |  |
|  | **6** | **77** | **83** |  | **6** | **82** | **84** |  | **6** | **80** | **82** |  |  |
|  | **7** | **89** | **91** |  | **7** | **65** | **69** |  | **7** | **62** | **59** |  |  |
|  | **8** | **59** | **67** |  | **8** | **78** | **74** |  | **8** | **77** | **77** |  |  |
|  | **9** | **63** | **72** |  | **9** | **80** | **85** |  | **9** | **83** | **90** |  |  |
|  | **10** | **71** | **75** |  | **10** | **71** | **74** |  | **10** | **68** | **71** |  |  |
|  | **11** | **82** | **81** |  | **11** | **81** | **83** |  | **11** | **80** | **78** |  |  |
|  | **12** | **64** | **67** |  | **12** | **67** | **72** |  | **12** | **60** | **64** |  |  |
|  | **13** | **74** | **74** |  | **13** | **71** | **66** |  | **13** | **74** | **69** |  |  |
|  | **14** | **84** | **89** |  | **14** | **82** | **79** |  | **14** | **83** | **86** |  |  |
|  | **15** | **69** | **78** |  | **15** | **74** | **79** |  | **15** | **78** | **75** |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

So the results are:

|  |  |  |
| --- | --- | --- |
| **Write the null hypothesis statement for STYLE::::** |  |  |
|   |  |  |  |  |  |  |
| **Write the alternate hypothesis statement for STYLE:::** |  |
|   |  |  |  |  |  |  |
| **Does STYLE have significance?** |  |  |  |  |
|  |  |  |  |  |  |  |
| **Write the null hypothesis statement for COMM INVOLVEMENT::::** |
|  |  |  |  |  |  |  |
| **Write the alt. hypothesis statement for COMM INVOLVEMENT::::** |
|  |  |  |  |  |  |  |
| **Does COMMUNITY INVOLVEMENT have significance? :::** |  |
|  |  |  |  |  |  |  |
| **Write the null hypothesis statement for 2 parent family:::** |  |
|  |  |  |  |  |  |  |
| **Write the alt. hypothesis statement for 2 parent family:::** |  |
|  |  |  |  |  |  |  |
| **Do 2 PARENT FAMILY not have significance?** |  |  |