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| Name: |  | |
|  | **Year 12 Essentials 2021 – Statistical Investigation 1**  **Bivariate Data Weighting: 7%**  **Hand out Date: \_\_\_\_\_\_\_\_\_\_\_ In-class Date 1: \_\_\_\_\_\_\_\_\_\_\_ In-class Date 2: \_\_\_\_\_\_\_\_\_\_\_**  **Mark \_\_\_\_\_\_ / 35** | |
| **Conditions:** | 1. week in total   Task sheet handed out beginning of week (or equivalent). Students can take task sheet home and plan out a response to the question.  Last 2 lessons of week (or equivalent) students will utilise class time to write a report to answer the question. The report will be collected after each lesson and after the final lesson the work in class will be handed in and graded. | |
| **Equipment** | - ruler  - calculator  - planning notes from home | - statistical thinking process planning sheet  - graph paper supplied |

**Scenario:**

A group of 40 FIFO workers were put through a 10 week sleep experiment aimed at figuring out what had the greater impact on the amount of quality sleep: hours viewing social media or amount of caffeinated drinks. Half of the workers recorded the total number of hours per week they were on Snapchat and Instagram, while the other half recorded the average number of caffeinated drinks that consumed in a week.

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| --- | --- |
| Total number of hours on social media through use on mobile device/ week  (hours) | Average Sleep per night (hours) |
| 14 | 7.5 |
| 23 | 4.25 |
| 12 | 7 |
| 18 | 6.5 |
| 34 | 5 |
| 31 | 5 |
| 7 | 11 |
| 25 | 5 |
| 16 | 8.25 |
| 20 | 4.5 |
| 37 | 4 |
| 22 | 4 |
| 11 | 9.5 |
| 27 | 6.25 |
| 9 | 12 |
| 23 | 4.5 |
| 22 | 5 |
| 28 | 4.25 |
| 17 | 6.5 |
| 35 | 4.25 |

|  |  |
| --- | --- |
| Number of caffeinated drinks per week | Average Sleep per night (hours) |
| 14 | 7 |
| 7 | 8 |
| 3 | 10 |
| 25 | 3 |
| 7 | 6.5 |
| 8 | 4 |
| 5 | 6.5 |
| 2 | 6 |
| 14 | 10 |
| 7 | 9 |
| 9 | 8 |
| 8 | 7 |
| 14 | 10.5 |
| 15 | 8.5 |
| 10 | 6 |
| 8 | 7 |
| 9 | 6.5 |
| 10 | 7.5 |
| 8 | 8 |
| 14 | 6 |

In a statistical report format, use the data provided to answer the question:

**”What has the greater impact on sleep, caffeine or social media?**