|  |  |  |  |
| --- | --- | --- | --- |
| Name:  Teacher : |  | | Date:\_\_\_\_\_\_\_\_\_ |
|  | **Year 12 Essentials 2020 – Statistical Investigation 1**  **Bivariate Data**  **Weighting \_\_\_\_\_ Due Date: \_\_\_\_\_\_\_\_\_\_\_\_** | **Mark \_\_\_\_/ \_\_\_\_** | |
| **Conditions:** | -1 lesson in class only (this is not a take home task)  - ruler  - calculator  - a page of notes  - graph paper supplied  - statistical thinking process planning sheet | | |

**Scenario:**

A group of 40 FIFO workers were put through a 10 week weight loss challenge aimed at figuring out what was a more effective weight loss strategy: dieting or increasing exercise. Half of the workers recorded the total number of days they followed their diet while the other half recorded the average number of minutes spent in the gym per day.

|  |  |
| --- | --- |
| Total number of days diet was followed  (days) | Weight loss (kgs) |
| 53 | 7.5 |
| 23 | 4.7 |
| 12 | 1.2 |
| 28 | 4.5 |
| 34 | 5.4 |
| 31 | 5 |
| 7 | 0 |
| 62 | 8 |
| 16 | 2.5 |
| 20 | 2.7 |
| 37 | 6.5 |
| 22 | 4.1 |
| 11 | 6.5 |
| 5 | 0.3 |
| 9 | 0.8 |
| 23 | 4 |
| 42 | 6.5 |
| 48 | 7.1 |
| 17 | 0.5 |
| 35 | 4.8 |

|  |  |
| --- | --- |
| Average daily time spent in the gym  (minutes) | Weight loss (kgs) |
| 30 | 1.2 |
| 45 | 4.5 |
| 0 | 0.5 |
| 10 | 2.1 |
| 13 | 0.6 |
| 60 | 7.0 |
| 5 | 4.5 |
| 20 | 3.3 |
| 50 | 0.6 |
| 24 | 0.5 |
| 36 | 3.2 |
| 12 | 1.9 |
| 18 | 2.1 |
| 28 | 4.5 |
| 35 | 4.0 |
| 42 | 1.2 |
| 26 | 2.5 |
| 32 | 4.0 |
| 8 | 3.5 |
| 14 | 1.6 |

Use the data provided to answer the question:

**”What has the greater effect on weight loss, following a diet or how much time you spend exercising?”**