NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Year 12 Essentials 2020 – Statistical Investigation 1 Bivariate Data**

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|  | **5 marks** | **4 marks** | **3 Marks** | **2 Marks** | **1 Mark** |
| Clarify the problem and pose question/s that can be answered with data” |  |  | Comprehensive intro that states purpose of investigation, variables involved in both contexts and references the question to be solved  Variables correctly noted in report as either dependant or independent. | Introduction that states purpose of the investigation, including variables involved | Any introduction at all |
| Design and implement a plan to collect or obtain appropriate data | Two scatterplots.  Appropriate trend line w/ ruler.  Half of all data above the line.  Consistent and appropriate scale w/ appropriate units. Title and both axes labelled for both scatterplots | Two scatterplots produced.  Appropriate trend line w/ ruler. Half of all data above the line.  Uses a scale that has satisfactory increments but not consistent between scatterplots. | Two scatterplots produced.  Appropriate trend line w/ ruler.  Half of all data above the line.  Uses a scale that has satisfactory increments but not consistent between scatterplots  More than two of the following missing: labels on axes, no title, inconsistent scale, ruler not used. | One scatterplot produced.  Inappropriate trend line. Ruler used.  Inappropriate scale.  Missing either axis  labels or title. | One scatterplot produced.  Inappropriate trend line. Ruler not used.  Both variables plotted.  Incomplete labelling on the axes, improper scale chosen.  No title |
| Analyse information/data by using graphical or numerical techniques | Outlier identified.  Valid reason stated in context.  Uses trend line to make accurate predictions | Outlier identified and reason stated.  Correctly identifies direction, form and strength of association on both scatterplots.  Uses trend line to make predictions | Comment on outliers supplied  Correctly identifies any two of direction, form and strength on both scatterplots  Uses trend line to make predictions for one scatterplot | Mentions any two of direction, form and strength of association OR only correctly mentions association of one of the scatterplots | No comment on outlier  No comment on association |
| Interpret the results and relate the interpretation to the original question | Correctly mentions there is a correlation, but not causation  Ideas that may also affect causation provided | States relationship between both diet/weight loss AND exercise/weight loss  Mentions correlation vs causation, doesn’t clearly define the two. | Vague mention of causation | States relationship between either diet/weight loss OR exercise/weight loss  No mention of causation (other factors that can affect weight loss) | No mention of any relationship of the variables in involved |
| **Conclusion** |  |  | Conclusion summarises findings in sufficient detail (teacher’s discretion) | Conclusion uses minimal detail to summarise findings | Conclusion simply provides answer to question posed |
| **TOTAL** | /21 | | | | |