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| Name:      Teacher : |  | | Date:\_\_\_\_\_\_\_\_\_ |
| Logo, company name  Description automatically generated | **Year 12 Essentials 2022 – Statistical Investigation 2**    **Statistical Investigation 2: Graphs, Census and Surveys**    **Weighting 7%                   Due Date: \_\_\_\_\_\_\_\_\_\_\_\_** | **Mark \_\_\_\_/ \_\_\_\_** | |
| **Conditions:** | -3 lessons in class  - ruler  - calculator  - statistical thinking process planning sheet | | |

*Scenario: Jack runs a café at Stockland Baldivis Shopping Centre from 6:30am till 3:30pm 6 days a week (closed Sunday). He sells hot drinks and bakery items.*

**Task 1:** He makes a cappuccino at 10am. It then cools down by the same amount every minute.

At 10:03am the temperature is 71. At 10:05am the temperature is 65

By plotting these two points on a graph:

* find the temperature by which the cappuccino is by each minute
* find the initial temperature of the cappuccino.
* Use an equation find the cappuccino’s temperature at 10:20 am
* State a limitation with the assumptions of this scenario.

**Task 2:** To ensure Jack has a plentiful supply of baked items in his food cabinet Jack decides to conduct a survey following the statistical investigation process below:

• clarify the problem and pose one or more questions that can be answered with data

• Design and implement a plan to collect or obtain appropriate data

• select and apply appropriate graphical or numerical techniques to analyse the data

• interpret the results of this analysis and relate the interpretation to the original question

• communicate findings in a systematic and concise manner.

Chart

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