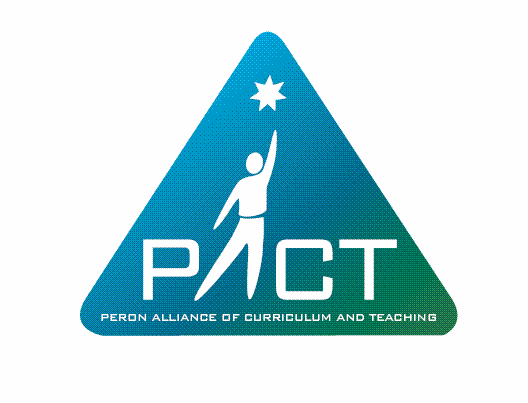
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| --- | --- | --- | --- | --- | --- |
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| Baldivis logo cropped | **Mathematics Applications Unit 3 & 4 Year 12**  **Investigation 1, 2018**  **Topic – Data Investigation Take Home Component** | | | |  |
| **Equipment:** | *SCSA Formula sheets, CAS calculator,*  April 2017 Weather Data for Perth. | | | | |
|  | | | | | |
| **Date out:** | | *Week \_\_\_\_ Date \_\_\_\_\_\_\_\_* | **Date Due:** | *Week \_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_* | |
| **Take home component weighting:** | | *0% of the year* | **In-class component weighting:** | *5% of the year* | |
| **Important Information:**  Although the take-home component is not worth any marks, it is essential in preparation for the in-class component. Knowledge and skills gained will be extended in the in-class validation component. This in-class validation will be completed under test conditions on the day in which this take-home component is due. The take-home component may be used when completing the in-class component. Contact may be made to parent(s) if the take-home component is not available for submission (at the start of the lesson. | | | | | |



This Investigation covers your knowledge and skills in the area of Bivariate Data.

**Bivariate data analysis (3.1.1–3.1.19)**

Identifying and describing associations in categorical and numerical data – model and analyse associations using the framework of the data investigation process

**Take Home Component**

Using the data from

**Perth, Western Australia**

**April 2017 Daily Weather Observations**

**Pre Task Activities**

1. Investigate the relationships between the

***Temperature at 9* am** and

1. the ***temperature at 3pm***
2. The ***maximum daily temperature***

Use your information to answer these questions

If the temperature at 9 am is 21.1º

* predict the temperature at 3 pm and the Max temperature
* comment on the reliability of both predictions

If the temperature at 9 am is 25 º

* predict the temperature at 3 pm and the Max temperature
* comment on the reliability of both predictions

1. What is the formula to calculate the residuals of each of the predications?

Calculate the residuals for the Temperature at 9am and 3pm and sketch a graph of them.

Use the residual plot to decide if the data being investigated is linear or non-linear

1. Does a Higher temperature mean increased Evaporation?

**Make sure you have the Max Temp data on your calculator for the In Class Validation**