

**EVANS RIVER K-12 SCHOOL  
COURSE ASSESSMENT**

**SUBJECT: Mathematics – General (Preliminary)**

<b>OUTCOMES to be assessed:</b>	
<b>Number:</b>	<b>Outcome:</b>
P4	Represent information in various forms
P8	Model financial situations
P9	Determine appropriate form of data representation

<b>The Task:</b>	Financial Mathematics project
<b>Weighting:</b>	<b>15%</b>
<b>Mark:</b>	34
<b>Time Allowed:</b>	<b>4 weeks</b>
<b>Due Date:</b>	Wednesday May 3 (Week 1)

Choosing 2 towns in Australia, from your selected letter complete the following tasks

- Create a table, using a spreadsheet, of 10 houses for sale in each town, noting price, address and features (**3 marks**).
- Calculate average price for each town, showing value and how this value was calculated by spreadsheet (**2 marks**)
- Show each house price on an appropriate graph or chart (different one for each town). Explain why these forms of displaying data are appropriate, and give an example of an inappropriate type (giving reasons) (**4 marks**)
- Determine for 1 house, the total cost of a housing loan, including fees, charges, interest, stamp duty etc (include documentation). You need to examine all costs associated with the loan over a 20 year period( i.e. not including insurance, rates etc) (**5 marks**)
- Calculate the equivalent flat rate of interest(per annum) for one of the houses for a 10 year loan. (**2 marks**)
- Show on a graph, how simple interest (flat), compares to compound over 2, 5, 10 and 20 year period for a \$100000 loan. Graphs should be hand drawn and working should be shown as to how values were calculated (spreadsheet or calculator. Interpolate(in between values) to find difference in interest at 8 years and extrapolate(extend values) to 30 years. Using this graph or otherwise, calculate the difference on a loan of \$100000 over 15 years at 6%. (**5 marks**)
- Research the current market rental price, changes in house prices in last 10 years, and predict price in 10 years for your average house, in one of your towns, and calculate the current return on your investment (as a %) (Include documentation or websites accessed). Include graphs where possible. (**4 marks**). If you cannot find data for the town, you may use 2 different shares with the same letter (using current market price, dividend to find return and predicting future price)

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- Include a critique( analysis or outline) of any problems you encountered or other noteworthy aspects , as well as a simple diary of your work.( **4 marks**) Eg Tue 25<sup>th</sup>
  - - accessed [www.realestate.com.au](http://www.realestate.com.au) to find prices
  - Drew up tables of house prices

You must show your teacher your work at the following time

- Early Wk 11 - marks will be deducted if this is not complied with

Resources(possible): Sydney Morning Herald or Courier Mail (Saturday)

[www.realestate.com.au](http://www.realestate.com.au) [www.domain.com.au](http://www.domain.com.au)

Australian bureau of statistics website [www.abs.gov.au](http://www.abs.gov.au)

Various banks, credit unions

Time Allocation: It is expected that you will spend approx 6-10 hours on this project

#### **MARKING SCHEME:**

Your responses will be marked on your ability to meet the criteria

- Include working where appropriate
- Include resources used or accessed
- Complete all tasks
- Adequately explain your answers as requested
- Presentation of final document (**5 marks**)