

# PICTON HIGH SCHOOL

Creating Opportunities Achieving Success



## YEAR 12 HSC General Mathematics One

### Assessment Task 2 Major Project

<b>Due Date:</b> Monday May 28 <sup>th</sup> 2018 Week 5	<b>Assessment Name:</b> Major Work
<b>Mark:</b> /42	<b>Weighting:</b> 30 %

#### SYLLABUS OUTCOMES TO BE ASSESSED:

- MG1H-1 **uses** mathematics and statistics to **evaluate** and construct arguments in a range of familiar contexts
- MG1H-2 **analyses** representations of data in order to make predictions
- MG1H-3 makes **predictions** about everyday situations based on simple mathematical models
- MG1H-5 **interprets** the results of measurements and calculations and makes judgements about reasonableness, including the conversion to appropriate units
- MG1H-6 makes **informed decisions** about financial situations likely to be encountered post-school
- MG1H-9 **chooses** and uses appropriate technology to organise information from a range of practical and everyday contexts
- MG1H-10 **uses** mathematical argument and reasoning to **evaluate** conclusions drawn from other sources, **communicating** a position clearly to others

#### DIRECTIVES TO BE ASSESSED:

**Uses:** Utilises skills as a means of accomplishing or achieving an outcome

**Evaluate:** Make a judgement based on criteria; determine the value of

**Analyses:** Identify components and the relationship between them; draw out and relate implications

**Predict:** Suggest what may happen based on available information

**Interpret:** Draw meaning from the mathematical result

**Informed decisions:** To use information available to make a choice based on pros, cons and risks.

**Chooses:** To makes the best selection given the information given

**Communicates:** Conveys and imparts knowledge

#### TASK DESCRIPTION:

##### When can I move Out?

Your task is to write a report that justifies when you will be able to afford to move into your own home. The principle focus for this task is to calculate costs involved in purchasing/renting houses and units, the costs of household running, maintenance and repair costs. As an occupant, you should also consider the costs of appropriate levels of food, water, electricity etc. and ways to reduce household expenditure and minimise wastage.

Your report should address each of these **three** parts.

### Part 1 – Housing Affordability (12 Marks)

1. Write a statement predicting when you will be able to afford to move out of home, listing at least two reasons to justify your answer.
2. Find the cheapest liveable unit/house in the area of your choosing. You should include a copy of the property you **choose**, showing the purchase price or rental amount. Include a brief statement explaining why you chose this property, giving at least two reasons for your choice.
3. If you are choosing to purchase a property, assume you will need to finance 95% of the property. If you are renting you will need to include the bond amount in your calculations. **Use** a mortgage calculator to **predict** the weekly cost involved in purchasing such a property. Include a copy of the calculation.

### Part 2 – Consumption and Expenditure (18 Marks)

1. Estimate your weekly electricity consumption.
  - a. Create a table of the major appliances normally found in a home, and use an online energy consumption calculator such as <http://www.smarterchoicecalculator.com.au/> to determine the weekly running costs for your household's appliances. You also need to make estimates for other electrical items such as lights, computers and hot water.
  - b. You must **communicate** how you made an **informed decision** to determine your weekly figure.
2. Estimate your weekly grocery bill, and **use** an appropriate website Eg. [www.colesonline.com.au](http://www.colesonline.com.au) present your ideas, as a screen shot or print out. Create a weekly shopping list on Coles or Woolworths online to help predict your expenses.
3. Ongoing fees, levies and charges.
  - a. Find out what sort of regular bills you will need to pay for your residential home, such as insurance, water rates, taxes and telephone. Make estimates and **predictions** for each based on recent bills provided in class. You can use Telstra or similar website for phone and internet packages.
4. Make an **informed decision** about the likelihood you will have a personal loan for a car or similar item. **Predict** the costs involved in this and include it in your budget.
5. Set Up Costs – Consider if you will need furniture in your new house. List the major things you will need and approximate costs. Justify your answers. Show any websites you used E.g. Fantastic Furniture. Will you need to hire a trailer? Consider any other things you might need when you first move in.

Part 3 – Bring it all Together (12 marks)

1. **Calculate** a weekly amount that you will need to earn in order to pay for all of the expenses outlined in your case study. Create a balanced budget showing all of the expenses you have included.
2. Write a statement of no more than 400 words that **justifies** and **communicates** how you arrived at your figure. **Interpret** whether or not this will be a viable prospect straight out of school, and **predict** at what point this would be more appropriate in your statement.
3. In a statement, make an **informed decision** on how you could afford these costs sooner, or how you could reduce your calculations to suit your needs. Evaluate your original prediction in a statement, giving at least two justifications from your research.

**ASSESSMENT CRITERIA – STUDENT CHECKLIST:**

You will be assessed on your understanding of the focus topics (FSHo1CEC Accommodation costs: buying and renting and FSHo2CEC Costs of running a household, maintenance and repairs) and how these topics relate to real life financial situations.

**Checklist**

- chooses a property that is the most affordable
- Use mortgage calculator to determine cost
- Create list of appliances and electrical and estimate running costs.
- Compare calculations to actual costs to determine weekly figure
- Estimate the cost of grocery bills
- Consider any other expenses that may arise when moving
- Estimate the cost of other bills, levies, fees and charges
- Calculate the costs involved in moving out.
- Write a statement how you arrived at this figure.

**Check your assessment booklet for the PHS Assessment Policy**

## ASSESSMENT MARKING CRITERIA

Criteria Part 1 – Housing	Marks
<b>Part 1 – Question 1 Prediction Statement</b>	
- Student creates a realistic prediction about when they can move out of home, the prediction includes a statement showing 2 reasons justifying the prediction	4
- Student creates a realistic prediction about when they can move out of home, the prediction includes a statement showing 1 reason justifying the prediction	3
- Student creates a realistic prediction about when they can move out of home, the prediction includes a statement showing no reasons justifying the prediction	2
- Student creates a basic or unrealistic prediction about when they can move out of home, the prediction includes a statement showing no reasons justifying the prediction	1
Incorrect or No attempt.	0
<b>Part 1 – Question 2 Choosing a property</b>	
- An appropriate property is selected, and all relevant details including price are shown. A screenshot or copy of the property advertisement is included in the assignment. A clear statement on why this property was selected is included, giving at least 2 reasons for the selection.	4
- An appropriate property is selected, and all relevant details including price are shown. A screenshot or copy of the property advertisement is included in the assignment. A clear statement on why this property was selected is included, giving at least 1 reasons for the selection.	3
- An appropriate property is selected, and all relevant details including price are shown. A screenshot or copy of the property advertisement is included in the assignment. No statement on why this property was selected is included.	2
- An appropriate property is selected, and only some details including price are shown. A screenshot or copy of the property advertisement is included in the assignment. No statement on why this property was selected is included.	1
- Incorrect or No attempt.	0
<b>Part 1 – Question 3 Calculations on the mortgage</b>	
- Student has used the mortgage calculator to determine the weekly loan repayment. All calculations are shown, showing price, bonds, deposits etc. Full working out is shown.	4
- Student has used the mortgage calculator to determine the weekly loan repayment. Most calculations are shown, showing price, bonds, deposits etc. includes most relevant working out is shown	3
- Student has used the mortgage calculator to determine the weekly loan repayment. Only some calculations are shown, showing price, bonds, deposits etc. little working out is included.	2
- Student has used the mortgage calculator to determine the weekly loan repayment. No calculations are shown, showing price, bonds, deposits etc. No working out is included.	1
- Incorrect or No attempt.	0

## ASSESSMENT MARKING CRITERIA

Criteria Part 2 – Consumption & Expenditure	Marks
<b>Part 2 – Question 1 Electricity Consumption</b>	
- Table of appliances is fully complete with all calculations and working shown. A decision on energy consumption is included with a total weekly expense provided.	4
- Table of appliances is fully complete with most calculations and working shown. A decision on energy consumption is included with a total weekly expense provided.	3
- Table of appliances is mostly complete with some calculations and working shown. A decision on energy consumption is included with a total weekly expense provided.	2
- Table of appliances is mostly complete with some calculations and working shown. A decision on energy consumption is not provided.	1
Incorrect or No attempt.	0
<b>Part 2 – Question 2 grocery Bills</b>	
- An appropriate weekly grocery list is included, all prices listed with evidence that an appropriate website was used to create the list. A correct calculation for the total weekly cost is provided.	4
- An appropriate weekly grocery list is included, with evidence that an appropriate website was used to create the list. A correct calculation for the total weekly cost is provided.	3
- An appropriate weekly grocery list is included, with evidence that an appropriate website was used to create the list. An incorrect calculation for the total weekly cost is provided.	2
- An appropriate weekly grocery list is included, with evidence that an appropriate website was used to create the list. No calculation for the total weekly cost is provided.	1
- Incorrect or No attempt.	0
<b>Part 2 – Question 3 Ongoing expenses</b>	
- Using the bills provided, students create a table or similar with reasonable estimates showing all calculations with evidence of websites and primary sources used. - A weekly summary is shown of all expenditure	4
- Using the bills provided, students create a table or similar with reasonable estimates showing all calculations with no evidence of websites and primary sources used. - A weekly summary is shown of all expenditure	3
- Using the bills provided, students create a table or similar with estimates showing some calculations with no evidence of websites and primary sources used. - A weekly summary is shown of all expenditure	2
- Using the bills provided, students create a table or similar with estimates showing no calculations with no evidence of websites and primary sources used. - A weekly summary is shown using some expenses	1
- Incorrect or No attempt.	0

<b>Part 2 – Question 4 Personal Loans</b>	
- A statement is included showing an informed decision regarding personal loans, this prediction is then included in the budgets.	2
- A statement is included showing an informed decision regarding personal loans, it is not included in the budgets.	1
- Incorrect or No attempt.	0
<b>Part 2 – Question 5 Set Up Costs</b>	
- Student shows understanding of set up costs involved and lists a comprehensive list showing all things needed to set up a new home. All calculations and resources are shown in their working. Consideration has been made for the moving process.	4
- Student shows understanding of set up costs involved and lists a comprehensive list showing most things needed to set up a new home. All calculations and resources are shown in their working. Consideration has been made for the moving process.	3
- Student shows understanding of set up costs involved and lists a comprehensive list showing most things needed to set up a new home. Some calculations and resources are shown in their working. Some consideration has been made for the moving process.	2
- Student shows understanding of set up costs involved and lists a comprehensive list showing some things needed to set up a new home. No calculations and resources are shown in their working. No consideration has been made for the moving process.	1
- Incorrect or No attempt.	0

<b>ASSESSMENT MARKING CRITERIA</b>	
<b>Criteria Part 3 – Bringing it Together</b>	<b>Marks</b>
<b>Part 3 – Question 1 Create a budget</b>	
- Creates a suitable budget outlining all of the expenses covered shows correct calculations and working out.	4
- Creates a suitable budget outlining all of the expenses covered shows most correct calculations and some working out.	3
- Creates a suitable budget outlining all of the expenses covered shows some correct calculations and working out.	2
- Creates a suitable budget outlining most of the expenses covered shows no correct calculations and working out.	1
- Incorrect or No attempt.	0

<b>Part 3 – Question 2 Write a Statement</b>	
- Writes a persuasive statement that communicates clearly how the decision was made. Includes at least 2 reasons to justify the conclusion. Includes a reasonable prediction based on their calculations.	4
- Writes a persuasive statement that attempts to communicate how the decision was made. Includes at least 2 reasons to justify the conclusion Includes a reasonable prediction based on their calculations.	3
- Writes a persuasive statement that attempts to communicate how the decision was made. Includes at least one reasons to justify the conclusion Includes an attempt at a prediction based on their calculations.	2
- Writes a persuasive statement that attempts to communicate how the decision was made. Giving no reasons to justify the conclusion No prediction is given.	1
- Incorrect or No attempt.	0
<b>Part 3 – Question 3 Informed Decision &amp; Evaluation</b>	
- Student clearly provides an informed decision on moving out based on their research, showing methods to save money to suit their needs. An evaluation of their initial statement is given, giving at least 2 justifications from their research.	4
- Student clearly provides an informed decision on moving out based on their research, showing methods to save money to suit their needs. An attempt at an evaluation of their initial statement is given, giving at least 1 justifications from their research.	3
- Student clearly provides an informed decision on moving out based on their research, showing methods to save money to suit their needs. An attempt at an evaluation of their initial statement is given, giving at least 1 justification from their research.	2
- Student clearly provides an informed decision on moving out based on their research, showing methods to save money to suit their needs, no evaluation of their initial statement is given, giving no justifications.	1
- Incorrect or No attempt.	0