



LACHLAN ACCESS PROGRAM

ASSESSMENT TASK NOTIFICATION

Subject: 11 Mathematics Standard	Task Number: 2
Type of Task: Investigation	Coordinating Teacher: Simone Parkinson (UCS) Cooperating Teacher: Judith Davis (CHS) Lanie Verinder (CHS) Kali Ratu Roraduri (LCCS)
Date Issued: Term 2 Week 6 Thursday 6 th June 2024	Date Due: Term 2 Week 10 Monday 1 st July 2024 by 9am
Total Marks: 50	Weighting: 30%
Submission Instructions: <i>Students are to submit all assessment tasks through the Assessment Submissions Tab on the MS Team prior to 9.00am on Monday 1st July 2024.</i>	
Task Context: <i>In the topic, budgeting and household expenses, you have learnt about budgeting, buying a car and the costs related with purchasing and borrowing money to fund the purchase of a car. In the topic Interest and depreciation, you have learnt about loans, interest and depreciation.</i> <i>In this task you will research vehicle advertisements to purchase a vehicle including associated costs, loan repayments and the depreciation of your vehicle.</i>	
Syllabus Outcomes: MS11-2 represents information in symbolic, graphical and tabular form MS11-5 models relevant financial situations using appropriate tools MS11-6 makes predictions about everyday situations based on simple mathematical models MS11-9 uses appropriate technology to investigate, organise and interpret information in a range of context MS11-10 justifies a response to a given problem using appropriate mathematical terminology and/or Calculations	
Task Description: You will follow the process to purchase a car and then calculate the associated costs with purchasing a vehicle including loan repayments and depreciation.	
Criteria for Assessing Learning Students will be assessed on their ability to: <ul style="list-style-type: none">• Compare different vehicles and decide which vehicle to purchase based on your budget• Calculate the costs involved in purchasing a vehicle including registration, CTP green slip, insurance, stamp duty, fuel consumption and servicing/maintenance costs• Calculate the total cost of a loan• Calculate the cost of owning a car for a given time period• Justify your decisions with reasoning and calculations	



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HSC Key Verbs

Calculate: give a numerical solution

Choose: to select an option available

Compare: explain the similarities and difference between 2 parts

Describe: State meaning and identify essential qualities in words

Explain: Relate the cause and effect between things, make the relationship clear

Justify: support an argument with calculations

Summarise: give a brief statement of the main points of something

NESA "All My Own Work"

By signing for this assessment task and having completed the NESA course "All My Own Work" I confirm that this assessment task will be free from plagiarism and reflective of my own work. I understand that if I am found to have plagiarised or engaged in malpractice, I will be referred to the HT Access to engage the LAP Malpractice process.



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Marking Guidelines:

Description	Marks
<ul style="list-style-type: none"> • Clearly and accurately describes aspects related to purchasing, maintaining and safety when operating a motor vehicle, including all evidence where required • Comprehensively compares and analyses the factors associated with owning a motor vehicle • Accurately determines the loan interest and the salvage value of the motor vehicle • Applies relevant mathematical theory correctly to real-life scenarios • Uses accurate and relevant language and terminology • Details well organised results and uses tables effectively 	45-50
<ul style="list-style-type: none"> • Describes aspects related to purchasing, maintaining and safety when operating a motor vehicle, including some evidence where required • Sometimes compares and analyses the factors associated with owning a motor vehicle • Applies some relevant mathematical theory to real-life scenarios • Uses some accuracy and relevant language and terminology • Uses some accuracy to determine the loan interest and the salvage value of the motor vehicle • Details results in a moderately organised report and has some use of tables 	35-45
<ul style="list-style-type: none"> • Describes limited aspects related to purchasing, maintaining and safety when operating a motor vehicle • Simplistically compares and analyses the factors associated with owning a motor vehicle • Limited use of relevant mathematical theory to real-life scenarios • Limited use of accurate and relevant language and terminology • Limited accuracy to determine the loan interest and the salvage value of the motor vehicle. • Details results, in a brief report with limited use of tables 	20-35
<ul style="list-style-type: none"> • States aspects related to purchasing, maintaining and safety when operating a motor vehicle • Very limited comparison of the factors associated with owning a motor vehicle • Very limited use of relevant mathematical theory to real-life scenarios. 	10-20
<ul style="list-style-type: none"> • Limited aspects related to purchasing, maintaining and safety when operating a motor vehicle • No comparison of the factors associated with owning a motor vehicle • No use of relevant mathematical theory to real-life scenarios 	0-10

Car Investigation – 50 Marks

You are finally in the market to buy your own car!

Part A: Selecting a car (8 marks)

By researching online find two cars between \$10 000 and \$30 000 that fit your needs.

1. Insert a screenshot of the advertisement for each car below. This needs to be done when you find them since advertisements disappear quickly!

a. Car One

1

b. Car Two

1

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2. Summarise the information of the car above and the car you chose into the table below.

4

	Car One	Car Two
Car year, make and model		
Engine and fuel type		
Tare weight		
Body type		
Exterior colour		
Transmission type		
Odometer reading (km)		
Fuel consumption rate		
Registration expiry and time left		
Other features <i>List at least two</i>		

3. Which car would you select and why?

2

Part B: What do you need to pay on the day? (15 marks)

When buying a car, you must pay transfer costs and stamp duty to put the car into your name. It is also strongly recommended to insure your car in case of an accident.

4. In NSW vehicles are registered through RMS (Roads & Maritime Services). How much will it cost to transfer the registration of a used car in NSW?

1

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5. In NSW, you need to pay motor vehicle duty (commonly known as stamp duty) when you are: 2
- registering a new vehicle for the first time
 - transferring a vehicle's registration to another person
 - registering an imported second-hand vehicle in NSW for the first time.

You will pay motor vehicle duty on the market value of the vehicle or on the price you paid for the vehicle, whichever is higher.

Motor vehicle value	Duty payable
Up to \$44,999	\$3 for every \$100
\$45,000 or more*	\$1,350, plus \$5 for every \$100

Calculate the stamp duty payable on your vehicle. *Show all working.*

6. When owning a car it is important to consider non-compulsory insurance to financially protect you in case of an accident. For your selected vehicle obtain a quote for the following:
- Comprehensive insurance quote for a driver under 25 years old
 - Third party property (fire and theft) insurance for a driver under 25 years old.

When obtaining quotes do not use personal contact details, instead use 0400 000 000 and fake@gmail.com as your details (this will stop you getting marketing materials). Use accurate details otherwise.

a. Comprehensive insurance

- i. Insert a screenshot of the quote.**

1

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ii. Describe in detail the level of coverage this insurance gives you.

2

b. Third party property (fire and theft) insurance

i. Insert a screenshot of the quote.

1

ii. Describe in detail the level of coverage this insurance gives you.

2

c. Insurance prices are different for a driver under the age of 25 and a driver over the age of 25. Is the price higher or lower for a driver under 25, explain why this is the case?

2

d. Which level of cover would you chose and why?

2

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7. What is the total amount of money you will need to spend on the day of buying the car. In your answer include the cost of buying the car, transferring the car and non-compulsory insurance. **2**

Part C: Car loan (12 marks)

To help you buy the car your parents have kindly given you 20% of the advertised value of the car, and you will need to get a loan to pay for the rest. Stamp duty, transfer costs and non-compulsory insurance costs will need to be paid from your savings (and won't be considered in this question).

8. Calculate 20% of the advertised cost of your car. **1**

9. How much will you need to get a loan for? **1**

10. You have decided to take out the loan over 5 years. By researching online, find two different loans and compare the costs of each below. **1**
- a. Screenshot of loan one.

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b. Screenshot of loan two.

1

11. Looking at the two loans above complete the table. *All this information should be given to you.*

2

	Loan One	Loan Two
Institution		
Fees		
Interest Rate		
Fortnightly Repayments		

12. Using the fortnightly repayments above find the total cost of the loan for each institution.

a. Institution one

2

b. Institution two

2

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13. Which loan will you chose and why?

2

Part D: Ongoing costs

(9 marks)

Re-registering your car

Every year you will need to renew your vehicle registration with the RMS. To register your car you need to pay:

- Compulsory Third Party insurance (CTP Greenslip)
- Registration fee and motor vehicle tax.

14. To renew your registration, light vehicles more than 5 years old need a safety inspection to be conducted (usually done by a mechanic). Will your car need a safety inspection?

1

15. It is compulsory to have a CTP Greenslip for your car.

a. What does a CTP Greenslip cover you for?

1

b. By using the [Greenslip price-check website](https://www.greenslips.nsw.gov.au/price-check), or otherwise, how much will a CTP Greenslip cost? Insert a screenshot of the cost. <https://www.greenslips.nsw.gov.au/price-check>

1

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16. By using the [registration calculator](https://myrta.com/myRego/pages/content/rc/RegistrationCalculator.page) on the Service NSW website, insert a screen shot of how much will it cost to renew your registration for one year? 1
- <https://myrta.com/myRego/pages/content/rc/RegistrationCalculator.page>
- When obtaining quotes do not use personal contact details, instead use 0400 000 000 and fake@gmail.com as your details (this will stop you getting marketing materials). Use accurate details otherwise.*

17. How much will it cost to renew the registration on your car? Assume a vehicle safety inspection costs \$50. 2

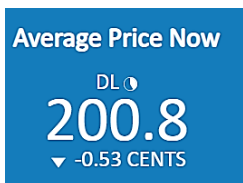
Petrol

Petrol is a significant ongoing cost of owning a car. Every day you work, or go to school, you will want to drive your car to and from school.

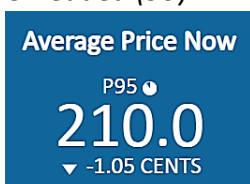
18. What is the trip distance of your home to school. 1

19. The 'Fuel Check' average fuel costs are given below. Using your cars fuel consumption, how much will it cost to drive to and from school for one week, assuming you are at school 5 days. 2

Diesel



Unleaded (95)



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Part E: Costs over one year

(4 marks)

20. By considering the costs found in Part B, Part C and Part D, how much money will you spend in your first year of owning your car? *You may attach extra paper for working if needed.*

4

Appendix – Useful Websites

Websites you may find helpful, or need to use, include, but are not limited to:

Part A	Buying a car: <ul style="list-style-type: none"> • http://www.carsales.com.au/ • http://www.tradingpost.com.au/Automotive/Browse • http://redbook.com.au/
Part B	Registration and stamp duty: <ul style="list-style-type: none"> • https://www.nsw.gov.au/driving-boating-and-transport/vehicle-registration/fees-concessions-and-forms/vehicle-registration-fees • https://www.nsw.gov.au/driving-boating-and-transport/vehicle-registration/fees-concessions-and-forms/stamp-duty-when-buying-a-vehicle Car insurance explained: <ul style="list-style-type: none"> • https://moneysmart.gov.au/car-insurance/choosing-car-insurance • www.bocsar.nsw.gov.au Getting car insurance: <i>You can obtain quotes from anywhere!</i> <ul style="list-style-type: none"> • www.aami.com.au • www.nrma.com.au
Part C	Car loans: <i>You can obtain quotes from anywhere!</i> <ul style="list-style-type: none"> • NAB http://www.nab.com.au/wps/wcm/connect/nab/nab/home/personal_finance/22/3 Westpac http://www.westpac.com.au/personal-banking/personal-loans/personal-loans/car-loans/ • ANZ http://anz.com/personal/personal-loans/car-loan/ • NRMA Loans http://www.nrmacarloans.com.au/content.aspx?p=810
Part D	<ul style="list-style-type: none"> • https://www.greenslips.nsw.gov.au/price-check • https://myrta.com/myRego/pages/content/rc/RegistrationCalculator.page