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| Name:  Teacher : | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Date:\_\_\_\_\_\_\_\_\_ |
|  | **Year 12 Essentials – Practical Application 2021**  **Loans and Compound Interest**  **Weighting 12% Due Date: \_\_\_\_\_\_\_\_\_\_\_\_** | **Mark \_\_\_\_\_\_\_\_\_** | |
| **Conditions:** | **Initial class discussion then**  **Individual work under test conditions**  **2 lessons in class** |  | |

Scenario

Danielle would like to buy a second-hand car that costs $15 995.

She has had $3000 in a term deposit for the last 2 years earning 1.4% p.a. interest compounded quarterly and he been saving 10% of her salary every month for the last 6 months which has been put into a savings account earning 0.45%p.a. interest compounded monthly.

Danielle can use this money for a deposit, but she will need to borrow the remaining amount.

She has a steady income and takes home $3200 a month.

Can Danielle afford a new car?

You will need to apply the mathematical thinking process:

• interpret the task and gather the key information

• identify the mathematics which could help to complete the task

• analyse information and data from a variety of sources

• apply their existing mathematical knowledge and strategies to obtain a solution

• verify the reasonableness of the solution

• communicate findings in a systematic and concise manner.