**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_**

**Car Project: Depreciation**

This is the fifth of five assessment tasks in the topic of motoring maths. This piece will count towards your overall assessment for VCE Foundation Mathematics.

1. Your car will depreciate over time (i.e., decrease in value. Become worth less). Estimate how much your car will be worth after 2 years if it depreciates at a rate of 12% p.a (Reducing balance depreciation).

**Marking Scheme**:

This piece is assessing Outcome 3: select and use technology to solve problems in practical contexts.

|  |  |
| --- | --- |
| A level | C level, also calculates the number of years after which the car would be worth less than $1000. This is done by means of plotting the compound depreciation formula A=P(1-i)^n in the desmos graphing calculator and reading off the result. Students include a screenshot of this graph in their final project.  |
| B level | C level plus confirms calculations by means of the compounding interest formula.  |
| C level | Uses simple interest calculated twice in order to calculate the value of the car after 2 years. Expresses the total percentage decrease in the car's value over this two years.  |
| D level | D level plus expresses the final car value (at the end of 2 years) as a percentage of the initial purchase price.  |
| E level | Uses online calculator found at www.online-calculators.co.uk/business/depreciation.php to calculate the value of the car after 2 years.  |

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