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| **Topic 1: Number and Algebra** | **Compound Interest** | | |
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| 1. Steve and Dale want to purchase the same Jet Ski that costs $15,900 US.  Steve invested $x US in an account that pays an annual interest of 2.9% compounded monthly. After 10 years, he will have $15,900 US in the account.  Dale invested $8,000 US for *n* years. The investment has an annual interest rate of 2.5% compounded quarterly. After *n* years, the investment will be worth $15,900 US.     1. Calculate Steve’s initial investment, x, to two decimal places    2. Find the value of *n* | | | (3 marks)  (3 marks) |
| Mark scheme:  or  Finance Solver:  N = 10 I = 2.9 FV = +/- 15900 PY = 1 CY = 12  *x* = $11,901.55 | | (M1) Use of compound interest formula  (A1) Correct Substitutions  (A1)  (A1) for CY = 12 (M1) for all other correct entries  (A1) | |

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| years  or  Finance Solver  I = 2.5 PV = 8000 FV = -15900 PY = 1 CY = 4  *x* = 28 years | (M1) Use of compound interest formula (A1) Correct substitutions  (A1)  (A1) for CY = 4 (M1) for all other correct entries  (A1) |