

QUESTION 1.1

Part A *Financial penalty (FP) applies in parts (b) and (d).*
Accuracy penalty applies in part (e) if answer not given correct to 2 decimal places

(a) $4000 \times 0.97 = 3880.00$ (3880) (M1)(A1)(G2)

Note: Award **(M1)** for multiplication of correct numbers.

OR

(A1)

$3\% \text{ of } 4000 = 120$ (A1)(G2) [2 marks]

$4000 - 120 = 3880.00$ (3880)

(FP) (b) $3880 \times 0.3071 = 1191.55$ (M1)(A1)(ft)(G2) [2 marks]

Note: Award **(M1)** for multiplication of correct numbers. Follow through from their answer to part (a).

(c) $\frac{400}{0.3125}$ (M1)

$= 1280.00$ (1280) (A1)(G2) [2 marks]

Note: Award **(M1)** for division of correct numbers.

(FP) (d) 63.20 (A1)(ft) [1 mark]

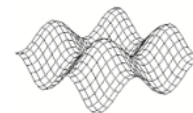
Note: Follow through (their (c) –1216.80).

(e) $t = \frac{63.20 \times 100}{1280}$ (M1)

$t = 4.94$ (A1)(ft)(G2) [2 marks]

Note: Follow through from their answers to parts (c) and (d).

continued...



Question 1.1 continued

Part B *Financial penalty (FP) applies in part (b).*
Accuracy penalty applies in part (c) if answer not given correct to 2 decimal places.

$$(a) \quad A = 1000 \left(1 + \frac{3.5}{2 \times 100} \right)^6 = 1109.7023... \quad (M1)(A1)(A1)$$

$$= 1109.70 \quad (AG)$$

Notes: Award **(M1)** for substitution into correct formula, **(A1)** for correct substitution, **(A1)** for unrounded answer. If 1109.70 not seen award at most **(M1)(A1)(A0)**.

OR

$$I = 1000 \left(1 + \frac{3.5}{2 \times 100} \right)^6 - 1000 = 109.7023 \quad (M1)(A1)$$

$$A = 1109.7023... \quad (A1)$$

$$= 1109.70 \quad (AG) \quad [3 \text{ marks}]$$

Note: Award **(M1)** for substitution into correct formula, **(A1)** for correct substitution, **(A1)** for unrounded answer.

(FP) (b) 109.70 (A1) [1 mark]

Note: No follow through here.

$$(c) \quad \frac{1000 \times 3 \times r}{100} = 109.70 \quad (A1)(M1)$$

$$r = 3.66 \quad (A1)(ft)(G2) \quad [3 \text{ marks}]$$

Notes: Award **(A1)** for 109.70 seen and used, **(M1)** for correct substitutions in simple interest formula, **(A1)** for answer. Follow through from their answer to (b).

(A0)(M1)(A0).

Total [16 marks]