Checking whether a model's answer makes practical sense

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. A principal of 400 dollars at 5% simple interest for 2 years is said to earn 4,000 dollars. Correct it. [2 marks]

$I = 400(0.05)(2) = 40.$

Answer: AUD 40.00 interest

2. For an annual interest formula, convert 9 months to years. [2 marks]

$\frac{9}{12} = 0.75.$

Answer: 0.75 years

3. Interest is 28 dollars on a 350-dollar principal. Find the final amount. [2 marks]

$A = P + I = 350 + 28 = 378.$

Answer: AUD 378.00

4. A ticket equation gives counts 4 and 11, but only 8 places are available. Which count is feasible? [2 marks]

Eleven exceeds capacity; four does not.

Answer: 4

5. A charge is 7.50 dollars per item. Find the total for 3 items and report it to cents. [2 marks]

$7.50 \times 3 = 22.50.$

Answer: AUD 22.50

6. A model assumes no booking fee, but the venue charges one. Explain how to improve the cost model. [3 marks]

The fee is paid independently of the number of people/items.

A revised form is $C = F + rn$ when fee F and per-person rate r are supplied.

Answer: Add the supplied booking fee as a fixed cost.