Comparison rates and choosing between loan models

6 questions | 18 marks

Equivalent correct methods earn the corresponding marks.

1. Offer A has total repayments AUD 12,300 and an upfront fee AUD 200. Offer B has total repayments AUD 12,450 and no fees. Both advance the same amount over the same term. Compare stated total costs. [3 marks]

Include A’s upfront fee.

Compare 12500 with 12450.

Answer: A: AUD 12,500.00; B: AUD 12,450.00; B is AUD 50.00 lower.

2. A fee of AUD 300 is financed into an AUD 12,000 loan. What principal should be used in the repayment formula? [3 marks]

The lender advances enough to cover the cash need and the financed fee.

Use principal $12000 + 300 = 12300$.

Answer: AUD 12,300.00

3. A loan advertises 5% interest with a comparison rate of 6%. Does this prove every borrower pays exactly 6% interest? Explain. [3 marks]

Separate the quoted interest rate from the summary comparison measure.

Different amounts, terms or excluded costs can change the effective cost.

Answer: No. The comparison rate summarises specified interest and fee assumptions; it is not the contractual interest rate for every borrower.

4. A fee-free loan advances AUD 2,000 and requires 12 monthly payments of AUD 175. Find the monthly rate in this cash-flow model and its effective annual rate. [3 marks]

Solve $2000 = \frac{175(1-(1+i)^{-12})}{i}$ numerically.

The monthly rate is 0.007587.

Annualise with $(1+i)^{12} - 1$.

Answer: Monthly 0.7587%; effective annual 9.4943%.

5. For an educational model, a loan's net advance is AUD 5,000 after fees. There are 10 equal annual payments of AUD 700. Write the equation defining its annual cost rate i. [3 marks]

Match the net advance to the present value of every required outflow.

Use annual periods because the payments are annual.

Answer: $5000 = 700\frac{1-(1+i)^{-10}}{i}$

6. A borrower plans to repay after one year, but an advertised comparison rate assumes five years. State two costs to check before choosing between offers. [3 marks]

The advertised term does not match the planned borrowing period.

Recalculate the relevant cash flows using the actual scenario rather than assuming the advertised ordering persists.

Answer: Check upfront/ongoing fees over the actual one-year term and any early-repayment or exit costs stated in the offers.