Interest-only loans and sinking funds

6 questions | 17 marks

Equivalent correct methods earn the corresponding marks.

1. Find the monthly interest-only payment on AUD 48,000 at 6% nominal annually, charged monthly. [3 marks]

Monthly rate is $0.06/12 = 0.005$.

Interest is $48000 \times 0.005 = 240$.

Answer: AUD 240.00

2. A no-interest sinking fund must reach AUD 18,000 after 36 month-end deposits. Find each deposit. [3 marks]

At zero interest, $S = nR$.

$R = 18000/36 = 500$.

Answer: AUD 500.00

3. For a loan with annual interest-only cost AUD 1,200 and a sinking-fund deposit AUD 2,600 each year, find the annual cash outflow. [3 marks]

Both payments must be budgeted.

$1200 + 2600 = 3800$; only the AUD 1,200 is loan interest.

Answer: AUD 3,800.00

4. A sinking fund has AUD 4,000 now and must reach AUD 15,000 in 4 years at 3%. Find each year-end deposit. [3 marks]

Grow the current savings: $4000(1.03)^4$.

The deposits must supply the remaining target.

Divide that remainder by $s_4(0.03)$.

Answer: AUD 2,509.30

5. A fund accumulates AUD 24,000 from 6 deposits of AUD 3,500. Find the interest earned by the fund. [3 marks]

Total deposits is $6 \times 3500 = 21000$.

Fund interest is $24000 - 21000 = 3000$.

Answer: AUD 3,000.00

6. An interest-only loan and sinking fund share a 5-year end date. Explain why interest-only payments alone do not meet the final debt. [2 marks]

Track the principal separately from periodic interest.

Confirm the fund target matches the debt still owing at maturity.

Answer: They pay for borrowing during the term but do not reduce the principal; the sinking fund or another source must provide the final principal.