Present/future value

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Future value of AUD 2400 at 3% annually for 4 years? [2 marks]

$2400(1.03)^4$.

Answer: AUD 2,701.22

2. Present value of AUD 6000 in 2 years at 5% annually, nearest cent? [2 marks]

$\frac{6000}{(1.05)^2}$.

Answer: AUD 5,442.18

3. Minimum deposit for AUD 8000 in 5 years at 6% annually? [2 marks]

$\frac{8000}{(1.06)^5} = 5978.065383$.

Round up to cents.

Answer: AUD 5,978.07

4. An investment reaches AUD 5500 after 8 quarters at 1.2% per quarter. Find the starting sum. [2 marks]

$\mathrm{PV} = \frac{5500}{(1.012)^8}$.

Answer: AUD 4,999.41

5. For a fixed positive rate and future target, why does a longer term need less starting money? [2 marks]

$\mathrm{PV} = \frac{\mathrm{FV}}{(1+i)^n}$; increasing n increases the denominator.

Answer: The larger growth factor produces a smaller present value.

6. Count annual periods from the end of Year 1 to the end of Year 4. [2 marks]

The intervals are 1→2,2→3,3→4.

Answer: 3