Compound interest and compounding periods

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Balance on AUD 1000 at 5% compounded annually for 2 years? [2 marks]

A=1000(1.05)^2=1102.50.

Answer: AUD 1,102.50

2. Compound interest on AUD 6000 at 4% annually for 3 years? [2 marks]

A=6000(1.04)^3=6749.184.

Interest=A−6000.

Answer: AUD 749.18

3. Balance on AUD 1500 at 8% nominal compounded half-yearly for 2 years? [2 marks]

i=0.04;n=4.

A=1500(1.04)^4.

Answer: AUD 1,754.79

4. Balance on AUD 8000 at 6% nominal compounded quarterly for 18 months? [2 marks]

i=0.015;n=6.

A=8000(1.015)^6.

Answer: AUD 8,747.55

5. Compare AUD 2000 at 10% simple and 10% annual compound interest after 2 years. [2 marks]

Simple=2000(1+0.1×2).

Compound=2000(1.1)^2.

Answer: AUD 2400 simple; AUD 2420 compound

6. A monthly model uses B_next=1.005 B. State monthly and nominal annual rates. [2 marks]

i=0.005.

12 i=0.06.

Answer: 0.5% monthly;6% nominal p.a.