Connect multiplicative recurrences to compound interest and reducing-balance depreciation.

Key knowledge | Free preview

Learning target: Connect multiplicative recurrences to compound interest and reducing-balance depreciation.

A multiplicative financial recurrence applies a constant percentage to the current value at each period. Its multiplier is one plus the interest rate for growth, or one minus the depreciation rate for decay. The explicit formula raises that multiplier to the number of completed periods. Specify the starting value, period and any transactions excluded from the model.

Try the mathematics

Task 1. A hypothetical $3000 investment earns 4% at each year-end with no deposits or withdrawals. Write a recurrence and explicit rule and calculate values after one, two and three years.

Continue with the full worksheet

The complete resource has 2 focused task sets and substantive worked solutions. Use an exercise book or print the A4 worksheet. This preview shows the first task without its full solution.

Find this resource: https://resources.aspiretopowerlearning.com.au/vce/skills/aspire-internal-gm-u1-o1-aos2-kk-05/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 1; Outcome 1; Key knowledge; Arithmetic and geometric sequences, first-order linear recurrence relations and financial mathematics; bullet 5; p. 31.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u1-o1-aos2-kk-05. This is an internal identifier, not an official VCAA code.

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