Connect additive recurrences and explicit formulas to simple interest and linear depreciation.

Key knowledge | Free preview

Learning target: Connect additive recurrences and explicit formulas to simple interest and linear depreciation.

Linear depreciation subtracts a fixed amount per modelling step. Flat-rate depreciation uses a fixed amount per time period, while unit-cost depreciation uses a fixed amount per item produced or distance travelled. Specify what the index counts. A formula may remain algebraically valid after its financial interpretation has ended, so restrict its domain.

Try the mathematics

Task 1. A $9600 machine loses $1200 each year. Write a recurrence, an explicit rule and values for years 0–4. When does the model reach zero?

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-04/

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 4; p. 31.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u1-o1-aos2-kk-04. This is an internal identifier, not an official VCAA code.

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