Formulate specific and general cases and derive results that support investigation

Key skills | Free preview

Learning target: Formulate specific and general cases and derive results that support investigation.

An illustrative club begins with 100 active members. A model retains 80% each week and adds 60 new members after retention. Treat outputs as expected counts. The supplied observations are invented for this activity, allowing a transparent comparison between mathematical predictions, assumptions and reported conclusions.

Try the mathematics

Task 1. Derive an explicit formula for this club. Then give the corresponding formula for $u_{n+1}=ru_n+b$, $r\neq1$, and explain the role of $L=b/(1-r)$.

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/sm-u1-o2-ks-02/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Specialist Mathematics; Unit 1; Outcome 2; Key skills; bullet 2; p. 63.

The learning target is a concise paraphrase. Aspire reference: sm-u1-o2-ks-02. This is an internal identifier, not an official VCAA code.

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