Generate tables, families of graphs or other result collections that support general investigation

Key skills | Free preview

Learning target: Generate tables, families of graphs or other result collections that support general investigation.

Use a calculator table, spreadsheet or short program to examine $u_0=100$, $u_{n+1}=0.8u_n+60$. Keep a record of inputs, iteration order and displayed precision. The closed form $300-200(0.8)^n$ gives an independent benchmark. Expected outputs below are mathematical checks for your run, not a claim that software has already run.

Try the mathematics

Task 1. Create columns n,recursive value and explicit value for n=0,...,8. In a spreadsheet, start A2=0,B2=100,C2=300-200*(0.8^A2); put A3=A2+1 and B3=0.8*B2+60, then fill downward. Give week-4 and week-8 checkpoints.

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-o3-ks-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Specialist Mathematics; Unit 1; Outcome 3; Key skills; bullet 4; p. 63.

The learning target is a concise paraphrase. Aspire reference: sm-u1-o3-ks-04. This is an internal identifier, not an official VCAA code.

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