Understand transformations that change non-linear data into linear data.

Key knowledge | Free preview

Learning target: Understand transformations that change non-linear data into linear data.

A suitable transformation can make a curved relationship linear in a new variable. Define that transformed variable explicitly, build a new table and plot the response against it. A straight-line rule in the transformed coordinates must be translated back before interpreting predictions. Check the transformed model against the original observations, not only its appearance.

Try the mathematics

Task 1. Data are (x,y)=(1,5),(2,11),(3,21),(4,35). Use $X=x^2$, tabulate (X,y), and find the line relating y to X. Give the equivalent rule in x.

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-u2-o1-aos3-kk-02/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 2; Outcome 1; Key knowledge; Variation; bullet 2; p. 39.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u2-o1-aos3-kk-02. This is an internal identifier, not an official VCAA code.

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