Inverse functions as reflected graphs

Key knowledge | Free preview

Learning target: Understand why reflecting a one-to-one function in y=x gives its inverse graph.

An inverse reverses input and output. It is a function only when the original rule is one-to-one on the stated domain. Its domain is the original range and its range is the original domain. Reflect corresponding points in y=x, and choose the algebraic branch that respects the restriction.

Try the mathematics

Task 1. For $f(x)=(x-1)^2+2$ with $x\geq 1$, find the inverse rule, its domain and its range. Check the inverse by composing the two rules.

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-mm-u1-o1-kk-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 1; Outcome 1; Key knowledge; bullet 4; p. 46.

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

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