Transforming points and graphs

Key knowledge | Free preview

Learning target: Understand how dilations, axis reflections and translations combine to change function graphs.

For y=A f(n(x+b))+c, an original point (u,v) becomes (u/n-b,Av+c). Horizontal changes act on inputs, so their apparent direction and scale differ from the written argument. Work with the coordinate rule to avoid guessing. Reversing a transformation requires undoing the operations in reverse order.

Try the mathematics

Task 1. A graph y=f(x) contains P=(3,5) and Q=(-3,-1). Find their images on y=-2 f(3(x-1))+4. Describe the horizontal and vertical transformations.

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-03/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 1; Outcome 1; Key knowledge; bullet 3; p. 46.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u1-o1-kk-03. This is an internal identifier, not an official VCAA code.

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