Expansion and factorisation by hand

Key skills | Free preview

Learning target: Expand and factorise linear and straightforward quadratic expressions with integer coefficients by hand.

Expansion applies the distributive law to produce a sum; factorisation reverses that process to reveal products. Look first for a common factor, then for a quadratic pattern. Multiplying the proposed factors is an exact check. A numerical test can reveal a mistake, but one matching value does not prove an algebraic identity.

Try the mathematics

Task 1. Expand $2(x-3)(x+4)$. Then factor $3x^2-12x$ and explain why the initial common-factor step matters.

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-ks-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 1; Outcome 1; Key skills; bullet 4; p. 47.

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

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