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| **Achievement Standard 2.6 - Algebra** |
| Apply algebraic methods in solving problems 4 credits External |
| **Achievement:** | **I can** | **Theta** | **Nulake** | **Links** |
| expand brackets up to 3 brackets | 1.01 – 1.06 p2-5 | p3 | [expanding](https://www.youtube.com/watch?v=_2NvkxBchm8) |
| simplify including algebraic fractions | 1.13-2.05 p14-22 |  |  [simplifying by cancelling](https://www.youtube.com/watch?v=3j2ghl_tV3Q)[with adding](https://www.youtube.com/watch?v=0ca5E1eRat0) \* |
| factorise expressions including quadratics | 3.01-3.06 p22-27 | p6, 8 | [factorise when “a” not equal 1](https://www.youtube.com/watch?v=VZBB17HJ7XU) |
| use fractional and negative indices | 8.01-8.06 p75-83 | p11 | [fractional indices](https://www.youtube.com/watch?v=AB3ARY9V0Cw)[negative indices](https://www.youtube.com/watch?v=lwyjhepDtzU) |
| use elementary properties of logs | 9.02 p88-90 | p20 | [properties of logs](https://www.youtube.com/watch?v=eLapHtvQbFo) |
| simplify rational expressions | 3.07 p29 | p24, 25, 27, 28 | See \* above |
| change subject of formula | 4.01-4.05 p30-37 | p13,15 | [change subject](https://www.youtube.com/watch?v=4rBR6DUpQkQ) |
| solve multi-step linear equations or inequations eg.  | 1.07-1.11 p8-10 | p31, 32, 33, 34 | [solve fraction equations](https://www.youtube.com/watch?v=gSyBLMhYWoc) |
| solve quadratics that can be factorised eg.  | 6.01-6.04 p48-50 | p37,38 | [solving quadratics](https://www.youtube.com/watch?v=SDe-1lGeS0U) |
| solve simple log equations eg.  | 9.01,9.03, 9.04 p86-93 | p18, 22 | [solving log equations](https://www.youtube.com/watch?v=o7uuzXdg4WE)[solving exp equations](https://www.youtube.com/watch?v=K47J5GFTnKU) |
| form and solve linear simultaneous equations | 5.01-5.05 p40-47 | p46, 47, 52 | [solve simultaneous eqns](https://www.youtube.com/watch?v=XM7Q4Oj5OTc) |
| **Merit:** | **I can** | **Theta** | **Nulake** |  |
| solve quadratics using the quadratic formula | 6.09p61 | p40, 41 | [quadratic formula](https://www.youtube.com/watch?v=H5AM1bzqCQw) |
| solve linear/non-linear simultaneous equations | 7.01-7.04 p63-74 | p50, 52 | [linear/non-linear](https://www.youtube.com/watch?v=YoVY5JwAF9o) |
| solve exponentials eg.  |  | p22 | [more exps](https://www.youtube.com/watch?v=M6f6dANVyxA) |
| solve non-linear equations which will be more complex |  | p32, 33, 35 |  |
| solve problems in context | 1.12 p11- 13, 4.06 p37-396.05-6.08 p52-58 |  |  |
| **Excellence:** | **I can** | **Theta** | **Nulake** |  |
| interpret the solution |  | p53 |  |
| explore the nature of the roots of a quadratic | 6.10p62 | p43 | [discriminant and nature](https://www.youtube.com/watch?v=8NJLDFVXHis) |
| complete a multi-step algebraic manipulation |  |  |  |
| complete an algebraic proof |  |  |  |