Quadratics work requirements

You should be **aiming** for ability.

Topic	**Knowledge**	**Skill**	**Ability**
3A Expanding and collecting like terms (p. 82) **Learning Goal:** *multiplied various algebraic sums* **Success Criteria:** *expanded and simplified algebraic sums*	1, 2	3-8 (a,c,e), 9 (a,c),	10
3B Factorising (p. 87) **Learning Goal:** *factorise algebraic expressions* **Success Criteria:** *used various techniques to factorise algebraic expressions, including the use of identities and trinomials*	1 (a,c,e)	2 (a,c,e,g,i), 3, 4-9 (a,c,e)	10
3C Quadratic equations (p. 92) **Learning Goal:** *solve quadratic equations* **Success Criteria:** *use factorising and the Null Factor Law to solve quadratic equations*		1 (a,c,e), 2, 3 (a,c,e), 4 (a,c,e,g,i,k,m),	5, 9-13
3D Graphing quadratics (p. 96) **Learning Goal:** *determined how transformations, affect the graph of a quadratic equation* **Success Criteria:** *graph quadratic equations, by recognising transformations*	1 (a,c,e), 2 (a,c)	3 (a,c,e,g,i,k)	
3E Completing the square and turning points (p. 101) **Learning Goal:** *find turning points of quadratic graphs, using completing the square* **Success Criteria:** *determined the coordinates of turning points, through completing the square*	1-2 (a,c,e,g)	3 (a,c,e,g,i), 4-6 (a,c)	
3F Graphing quadratics in polynomial form (p. 106) **Learning Goal:** *graph quadratic equations* **Success Criteria:** *graph quadratic equations, showing important features*		3-4 (LHS)	

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3G Solving quadratic inequalities (p. 110) **Learning Goal:** *solve quadratic inequalities* **Success Criteria:** *determine solution sets, by graphing and interpreting*		1, 2 (LHS), 3 (all), 4 (LHS), 5 (LHS)- CAS	6, 7, 8, 9
3H The general quadratic formula (p.112) **Learning Goal:** *solve quadratic equations, using a formula* **Success Criteria:** *correctly used the quadratic formula to solve equations*	1 (no CAS), 2	3 (LHS) - no CAS, 4 (LHS)- CAS	
3I The discriminant (p.116) **Learning Goal:** *determine the nature of solutions for quadratic equations* **Success Criteria:** *calculated the discriminant, and interpreted its significance in classifying solutions*	1 (all), 2(a,d), 3 (a, d), 4 (a, d)	5 (all), 9 (all), 10,	6-8, 11, 12, 15
3J Solving simultaneous linear and quadratic equations (p.120) **Learning Goal:** *solve a linear equation and a quadratic equation, simultaneously* **Success Criteria:** *solved for the 'intersection' coordinates of a linear equation and a quadratic equation*	3 (all)	1 (all), 2 (all), 4 (all)	5, 7, 9
3K Families of quadratic polynomial functions (p. 123) **Learning Goal:** *describe quadratic equations* **Success Criteria:** *written equations of quadratic relations, given particular features*	12, 14 (a,b,c,d), 20	1, 4, 5, 6, 7 (all), 13,	2, 3,11, 12, 15, 18, 19, 21-CAS
3L Quadratic Models (p. 132) **Learning Goal:** *used quadratic techniques to solve 'real problems'* **Success Criteria:** *interpreted mathematical information into quadratic equations, and subsequently solve for particular values*	6, 7,	1, 2, 4, 8	9, 10