Maths Workout - Algebra & Problem Solving

Topic 3 - Like Terms				
Target 1	**Target 2**	**Target 3**	**Target 4**	**Target 5**
Simplify an expression of up to 3 single variable terms by collecting like terms (positive answers)	*Add and subtract integers: Revision prior to adding and subtracting terms*	*Simplify an expression of up to 3 single variable terms by collecting like terms (pos and neg answers)*	*Simplify an expression of up to 4 double variable terms by collecting like terms*	*Simplify an expression of up to 6 double variable terms by collecting like terms*
1. Demo: Know 'like terms' and to simplify an expression consisting of 2 like terms, e.g. 2x+3x=5x, 3t-2=2t	1. Subtract a positive 1-digit or 2-digit integer from a positive 1-digit integer	1. Demo: Simplify an expression consisting of 2 like terms, e.g. 2x-3x=-x; Compare with integers	1. Speed Response: Identify double variable like terms	1. Simplify an expression consisting of 4 single variable terms, e.g. 2x+3b-3x+b=5x+2b
2. Speed Response: Identify like terms	2. Add a positive 1-digit integer to a positive 1-digit or 2-digit integer	2. Simplify an expression consisting of 2 like terms, e.g. 2x-3x=-x	2. Simplify an expression consisting of 2 like double variable terms, e.g. ab+3ba=4ab, $2x^2-3x^2=-x^2$	2. Simplify an expression consisting of 4 double variable terms, e.g. 2xy+3ab+3xy+ab=5xy+ab
3. Simplify an expression consisting of 2 like terms, e.g. 2x+3x=5x	3. Subtract a 1-digit or 2-digit positive integer from a 1-digit integer	3. Simplify an expression consisting of 2 like terms with 2 adjacent signs, e.g. 2x--3x=2x+3x=5x Showing intermediate working	3. Simplify an expression consisting of 2 like terms with or without 2 adjacent signs	3. Simplify an expression consisting of 5 single variable terms, e.g. 2x+3b-3x+b–4x=x+2b
4. Calculate missing lengths of a shape with part lengths as algebraic terms	4. Add a positive 1-digit integer to a 1-digit or 2-digit negative integer	4. Simplify an expression consisting of 2 like terms with 2 adjacent signs, e.g. 2x--3x=5x	4. Simplify an expression consisting of 3 like terms, e.g. 2xy+3xy-xy=4xy	4. Simplify an expression consisting of 5 double variable terms, e.g. 2xy+3ab+3xy+ab–xy=4xy+ab
5. Calculate missing lengths of a shape with part lengths as algebraic terms	5. Add a negative single digit integer to a negative single or 2-digit integer	5. Simplify an expression consisting of 2 like terms with or without 2 adjacent signs	5. Simplify an expression consisting of 2 like terms and a constant or other variable, e.g. 2xy+6-xy=xy+6	5. Simplify an expression consisting of 6 single variable terms, e.g. 2x+3b-3x+b+5x–3b=10x+b
6. Simplify an expression consisting of 3 like terms, two of them like, e.g. 2x+3b+3x=5x+3b	6. Subtract a negative 1-digit or 2-digit integer from a positive 1-digit integer	6. Simplify an expression consisting of 3 like terms, e.g. 2x+3x-x=4x	6. Demo: Rearrange an expression to enable easy simplification	6. Simplify an expression consisting of 6 double variable terms, e.g. 2xy+3ab–3yx+ba+5xy–3ab=10xy+ab
7. Calculate the perimeter of a rectangle with edge lengths as algebraic terms and constants	7. Subtract a negative 1-digit or 2-digit integer from a negative 1-digit integer	7. Simplify an expression consisting of 2 like terms and a constant or other variable, e.g. 2x+6-x=x+6	7. Simplify an expression consisting of 4 single variable terms, e.g. 2x+3b-3x+b=5x+2b	7. Solve an algebra wall puzzle with single variables: 3 along base: all positive
8. Calculate the perimeter of a rectilinear shape with edge lengths as algebraic terms and constants	8. Mixed additions and subtractions of integers	8. Speed Response: Identify an expression and its correct simplification, e.g. 3d-4d=-d	8. Simplify an expression consisting of 4 double variable terms, e.g. 2xy+3ab+3xy+ab=5xy+ab	8. Solve an algebra wall puzzle with single variables: 3 along base
9. Speed response: Identify an expression and the correct simplification, e.g. 3d-4d=-d	9. Solve a magic square puzzle with integers 3x3	9. Speed response: Identify an expression and its correct simplification, e.g. 3d-4d+7=-d+7		9. Solve an algebra wall puzzle with single variables: 3 along base: cryptic
	10. Solve a magic square puzzle with integers 4x4			10. Solve an algebra wall puzzle with single variables: 4 along base: all positive
	11. Solve a number triangle puzzle with integers; 3 along base			11. Solve an algebra wall puzzle with single variables: 4 along base
	12. Solve a number triangle puzzle with integers; 4 along base			12. Solve an algebra wall puzzle with single variables: 4 along base: cryptic