Algebra Place Value Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds algebraic values (x^2, x, $-x$, and units as applicable) using the correct algebra insert pieces in conjunction with the integer blocks.			
	Builds terms, increasing by a factor of x from right to left, with the appropriate amount as indicated by the coefficient or constant.			
Write	Writes appropriate numbers, including the variable if applicable, to represent each term or place value.			
Say	Clearly explains that in the base-x system, as we move from right to left, each term is increasing by a factor of x.			
	Clearly explains what the variable x represents and why it is used.			
	Correctly verbalizes the complete expression.			

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Solving Algebraic Equations Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Uses the appropriate x-blocks, $-x$-blocks, and integer blocks to build each term in the equation.			
	Builds the additive inverse of the lesser x term on both sides of the equation, then removes the zero pairs from each side to isolate the variable to one side of the equation.			
	Builds the additive inverse of the integer on the opposite side of the x term, then removes the zero pairs from each side.			
	Builds the number of equal groups needed (as indicated by the coefficient of the variable) on each side of the equation, then removes all but one of those groups in order to get a single x by itself and solve the equation.			
Write	Writes the additive inverses on both sides of the equation, then simplifies the equation.			
	Writes the multiplicative inverses on both sides of the equation in order to solve for $1x$, then simplifies the equation to show the final answer.			
Say	Explains the primary objective is to get a single variable to one side of the equation and the number/value to the other side.			
	Explains that when solving an equation, whatever is done to one side of the equation must be done on the other side to maintain equality.			
	Explains the use of the Additive Inverse Property to isolate the x terms and integers to opposite sides of the equation.			
	Explains the use of the multiplicative inverse to solve for $1x$.			

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Polynomials Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds any polynomial through the second degree using the appropriate x^2-blocks, x-blocks, $-x$-blocks, and integer blocks.			
	Builds polynomials in decreasing place-value order from left to right.			
Write	Writes numerals and mathematical symbols to accurately represent the polynomial.			
	Writes the polynomial in decreasing place-value order from left to right.			
Say	Clearly and accurately verbalizes the polynomial.			
	Clearly and accurately identifies the polynomial based on the number of terms (i.e., monomial, binomial, trinomial).			

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Polynomial Addition Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds addends using the appropriate x^2-blocks, x-blocks, $–x$-blocks, and integer blocks.			
	Aligns blocks representing each term in the first addend with corresponding blocks in the second addend.			
	Moves blocks representing the addends together to represent process of addition. Completes addition process starting with the constants on the right, then moving left.			
	When combining positive and negative x terms or constants, removes the zero pairs to reveal the sum.			
Write	Writes numerals and mathematical symbols to accurately represent the equation.			
	Writes the sum of each term with the appropriate sign under the addends (if adding vertically).			
Say	Clearly and accurately explains that to combine terms, they must be the same kind (e.g., "To combine, you must be the same kind.").			
	Clearly and accurately describes why regrouping is not used in the base-x system.			
	Clearly and accurately explains the steps of addition in each term.			
	Clearly states the final sum.			

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Binomial Multiplication (All Constants Positive) Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds a rectangle beginning with the x^2-block, placing x-blocks to the right and above, and integer blocks to the upper right to complete the rectangle.			
	Builds a rectangle with the first factor as "over" dimension and the second factor as "up" dimension.			
	Separates a larger rectangle into smaller rectangles that represent partial products, and shifts them according to place value.			
Write	Writes all terms that represent partial products and the total product according to place value in base-x system.			
Say	Clearly and accurately explains why specific blocks are chosen.			
	Clearly and accurately describes the separation and placement of partial product rectangles in relation to base-x place value.			
	Accurately correlates all partial product rectangles with individual terms being multiplied.			
	Clearly and accurately states the problem and the final product.			

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Binomial Multiplication (with a Negative Constant)

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds rectangle beginning with the x^2-block, placing x-blocks or $-x$-blocks to the right and above (depending on the sign of the constants) and positive or negative integer blocks (depending on the product of the constants) to the upper right to complete the rectangle.			
	Builds rectangle with first factor as "over" dimension and second factor as "up" dimension.			
	Separates larger rectangle into smaller rectangles that represent partial products and shifts them according to place value.			
Write	Writes all terms that represent partial products and the total product according to place value in base-x system.			
Say	Clearly and accurately explains why specific blocks are chosen.			
	Clearly and accurately describes the separation and placement of partial product rectangles in relation to base-x place value.			
	Accurately correlates all partial product rectangles with individual terms being multiplied.			
	Clearly and accurately states the problem and the final product.			

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Factoring Trinomials Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds a rectangle using x-blocks, $-x$-blocks, and positive or negative unit blocks as appropriate that represent the product.			
	Uses zero pairs with x-blocks and $-x$-blocks above and to the right of the x^2-block as applicable to build a complete rectangle.			
Write	Writes the "over" and "up" dimensions of the rectangle as the factors of the trinomial.			
	Checks the factors by multiplying.			
Say	Clearly and accurately explains factoring as the opposite of multiplication.			
	Clearly and accurately identifies the dimensions (edges/sides) of the rectangle as the factors.			
	Clearly and accurately explains the use of the additive inverse property as applicable to build the rectangle.			

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Polynomial Division Rubric

	Criteria	1. Beginning Steps	2. Nearing Expectations	3. Meets Expectations
Build	Builds a rectangle using x^2-blocks, x-blocks, $-x$-blocks, and positive or negative integer blocks as appropriate to represent the dividend.			
	Builds the "up" dimension of the rectangle that represents the divisor.			
	Counts out groupings of divisor to identify terms in quotient.			
Write	Writes result of each grouping of the divisor (current "over" dimension) in the quotient, concurrent with completion of each step until no further groups can be made.			
	Writes terms to accurately represent each step to solve the division equation.			
	Checks work using multiplication.			
Say	Clearly and accurately describes the mathematical relationship among the divisor, dividend, and quotient.			
	Clearly and accurately states the problem, final quotient, and remainder (if applicable).			
	Clearly and accurately states what the remainder represents (if applicable).			

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