

EL IM1 Appendix Standards
VOCAB ALWAYS
A1: Simplifying Algebraic Expressions (including Algebra Tiles and Expression Mats)
A2/F2: Solving Equations (including 1-step, 2-step, Fraction/Decimal Busters, proportional equations, checking solutions, and Equation Mats)
A3: Graphing on a Coordinate Plane
A4: Making and Interpreting Bar & Line Graphs
A5: Area and perimeter of rectangular and triangular figures

Standard Number	Topic Name	1 Below standard	2 Approaching standard	3 Meeting standard	4 Exceeding standard
Foundational Standards					
F1	Evaluating Algebraic Expressions	Students can evaluate numerical expressions with 2 basic operations	Students can evaluate numerical expressions with 4 basic operations + Level 1 AND fractions	Students can substitute and evaluate expressions in one variable with both basic and non-basic operations, including exponents + Levels 1-2 AND fractions	Students can substitute and evaluate expressions in 2 or more variables with both basic and non-basic operations, including absolute value and radicals + Levels 3-4 AND fractions
	examples	Evaluate a) $8 - 4 + 3$ b) $24 \div 6 \cdot 2$	Evaluate $8 + 7 \cdot (6 + 18 \div 3) + 38 \div 2$	Evaluate $5x^2 - \frac{6(3-x)}{x+7}$ for $x = -9$	Evaluate $ x + y + \sqrt{z} + xyz$ for $x = 12, y = -2, \text{ and } z = \frac{1}{4}$
F2 (EL IM1 A2)	Solving Linear Equations with Integer Coefficients	Students can complete an error analysis problem for a multi-step equation that involves the DP and CLT	Students can solve 2-step equations where solution is an integer, without the aid of algebra tiles	Students can solve multi-step equations, where solution is an integer or rational number + Levels 1-2	Students can solve multi-step equations with special solutions + Levels 1-3
	examples	Highlight/circle the FIRST mistake and describe the error: $2 - 5(x + 1) = 12$ $- 3(x + 1) = 12$ $- 3x - 3 = 12$ $- 3x = 15$ $x = -5$	Solve $2x - 5 = 5$	Solve a) $-2 + 4x - 1 = 4 + x - 1$ b) $2(5x + 3) = 6x - 3$	*no solution, infinitely many solutions
F3	Laws of Exponents	Students can complete an error analysis problem for simplifying an algebraic exponent expression with 2-3 laws used	Students can apply the laws of exponents to a product or quotient of scientific notation values	Students can evaluate numerical expressions involving exponents, including negative and zero exponents	Students can simplify mixed numerical and variable expressions involving exponents with 2-4 laws in each expression

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Chapter 1 Functions					

1a	Describing Functions HSF.IF.A.1	Students can identify 1 of the 4 types of domain/range in the representations under <i>Exceeding standard</i> OR Students inconsistently identify the domain, range, whether a relationship is a function or not, and incorrectly explains why not.	Students can identify 2 of the 4 types of domain/range in the representations under <i>Exceeding standard</i> OR Students correctly identify the domain OR range, but not both, and/or students correctly identify function and not function, but explanation of why not is incorrect.	Students can identify 3 of the 4 types of domain/range in the representations under <i>Exceeding standard</i>	Students can identify the domain and range of both a function and non-function in graph form. Students can identify the domain and range of functions in algebraic form, where one function has a domain of all real #s and any type of range, and the other function has a limited domain and any type of range.
1b	Evaluating Functions Algebraically HSF.IF.A.2	Students can accurately evaluate functions in 1 of the 3 representations: F(x), tile patterns, and graphically.	Students can accurately evaluate functions in 2 of the 3 representations: F(x), tile patterns, and graphically.	Students can evaluate all 3 types of functions in representations, with 1-2 minor errors (ex: switching input and output)	Students can accurately evaluate all 3 types of functions in multiple representations: F(x), tile patterns, and graphically. Students identify input and output values accurately.

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Chapter 2 Linear Functions					
2a	Slope (Identify and calculate slope in context) HSF.LE.A.2	Students can demonstrate the basic understanding of the slope of a linear function.	Students can identify and/or calculate the slope of a linear function and/or interpret the meaning of slope, with errors.	Students can identify and calculate the slope of a linear function and interpret the meaning of slope, with minor errors.	Students can accurately identify and calculate the slope of a linear function and interpret the meaning of slope in context.
2b	Writing y=mx+b HSF.LE.A.2	Students can accurately write an equation in y=mx+b for 1 of the 4 types of givens listed under <i>Exceeding standard</i>	Students can accurately write an equation in y=mx+b for 2 of the 4 types of givens listed under <i>Exceeding standard</i>	Students can accurately write an equation in y=mx+b for 3 of the 4 types of givens listed under <i>Exceeding standard</i>	Students can accurately write an equation in y=mx+b form when given: a) A story b) Numerical slope and y-intercept c) Table of values d) Graph of a line
2c	The Linear WEB (aka graphing y=mx+b) HSF.LE.A.2	Students demonstrate a basic understanding of different forms of linear functions.	Students can represent linear functions in some forms, with errors.	Students can represent linear functions in most forms, with minor errors.	Students can accurately represent linear functions in all forms (a table, graph, equation, word situation).
2d	Dimensional Analysis	Students demonstrate an understanding of the process of solving dimensional analysis problems.	Students can solve single dimensional analysis problems with errors.	Students can solve multi-step dimensional analysis problems with minor errors.	Students can accurately solve multi-step dimensional analysis problems in context.

<u>3a</u>	Rigid Transformations	Students demonstrate a basic knowledge of graphing and identifying rigid transformations.	Students can graph and identify some types of rigid transformations with errors.	Students can graph and identify most types of rigid transformations, with minor notation errors. Students can identify the function given a translation on the coordinate plane.	Students can accurately graph and identify all types of rigid transformations, including sequences of 2 transformations.
3b	Solving Equations in 1 Variable	Student can solve basic equations algebraically, and can attempt to solve other equations, with errors.	Student use appropriate methods (Rewriting, Undoing, Looking Inside) to solve some types of equations, with errors.	Student use appropriate methods (Rewriting, Undoing, Looking Inside) to solve all types of equations, with minor errors.	Student accurately solves all types of equations. (radicals, exponentials, non-integer coefficients) using appropriate methods (Rewriting, Undoing, Looking Inside)
3c	Multiplying using Area Models	Students demonstrate a basic understanding of the parts of the area model.	Students can, with minor errors, complete a basic area model.	Students can, with minor errors, complete most types of area models, including simplifying, and expressing the answer appropriately.	Students can accurately complete all types of area models, including simplifying, and expressing the answer appropriately.
3d	Slopes of Parallel and Perpendicular Lines	Students demonstrate a basic understanding of the properties of parallel and perpendicular slopes.	Students can find the parallel and/or perpendicular slopes and equations with minor errors.	Students can accurately find parallel and perpendicular slopes and equations for most situations.	Students can solve for and apply the properties of parallel and perpendicular equations and their slopes.
4a	Line of Best Fit (LSRL)	Students demonstrate an understanding of the process of finding the LBF using a calculator.	Students can use a calculator to find the LBF and correlation coefficient with minor errors.	Students can calculate the correlation coefficients and LBF using a calculator. Students can also perform calculations with the LBF with minor errors.	Students can accurately calculate the correlation coefficients and LBF equations using a calculator and use the LBF to make predictions in context.
4b	Describing Association	Students can identify at least one aspect of associations from data, graphs and/or correlation coefficients.	Students can, with errors, identify most aspects of associations, from data, graphs and/or correlation coefficients.	Students can identify all but one aspect of linear and non-linear associations, including the strength, direction, and outliers of linear associations from data, graphs and correlation coefficients.	Students can accurately identify linear and non-linear associations, including the strength, direction, and outliers of linear associations from data, graphs and correlation coefficients.
4c	Calculate and Interpret Residuals	Students demonstrate a basic understanding of residuals and their calculations	Students can calculate or interpret a residual with errors.	Students can calculate and interpret a residual with minor errors.	Students can accurately calculate residuals, and interpret their meaning in context.
5a	Arithmetic Sequences	Students have a basic understanding of arithmetic sequences.	Students can apply their knowledge of arithmetic sequences to identify some key features such as finding specific terms, the common difference, writing and applying explicit formulas with errors.	Students can apply their knowledge of arithmetic sequences to accurately identify all but one key feature such as finding specific terms, the common difference, writing and applying explicit formulas.	Students can accurately apply their knowledge of arithmetic sequences to identify key features (common difference, nth term, sequence generator) from multiple representations.
5b	Geometric Sequences	Students have a basic understanding of geometric sequences.	Students can apply their knowledge of geometric sequences to identify some key features such as finding specific terms, the common ratio, writing and applying explicit formulas with errors.	Students can apply their knowledge of geometric sequences to accurately identify all but one key feature such as finding specific terms, the common ratio, writing and applying explicit formulas.	Students can apply their knowledge of geometric sequences to accurately identify key features (common ratio, nth term, sequence generator) from multiple representations.
5c	Identifying Sequences	Students have a basic understanding of sequences.	Students, with minor errors, can differentiate between explicit vs recursive formulas, identify type of sequence, or apply the sequence pattern to find next terms.	Students, with minor errors, can differentiate between explicit vs recursive formulas, identify type of sequence, and apply the sequence pattern to find next terms.	Students can accurately differentiate between explicit vs recursive formulas, identify type of sequence, and apply the sequence pattern to find next terms.

