

A Correlation of  
**Pearson High School Mathematics  
Algebra 1 Common Core**  
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to the  
**California Common Core State Standards  
for Mathematics Standards Map  
Algebra I**

## California Common Core State Standards for Mathematics Standards Map

### Algebra I

★ *Indicates a modeling standard linking mathematics to everyday life, work, and decision-making*

Standard No.	Standard Language <sup>1</sup>	Publisher Citations	Meets Standard		For Reviewer Use Only
			Y	N	Reviewer Notes
	<b>NUMBER AND QUANTITY</b>				
<b>Domain</b>	<b>THE REAL NUMBER SYSTEM.</b>				
<b>Cluster</b>	<b>Extend the properties of exponents to rational exponents.</b>				
N-RN 1.	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. <i>For example, we define <math>5^{1/3}</math> to be the cube root of 5 because we want <math>(5^{1/3})^3 = 5^{(1/3)3}</math> to hold, so <math>(5^{1/3})^3</math> must equal 5.</i>	<b>SE/TE:</b> 109-111, 116-118, CB 122-123, 124-126, 253-256, 336-340, 732-734, 746-749  <b>TE:</b> 114A-115B, 121A-121B, 121A-121B, 129A-129B, 259A-259B, 343A-343B, 737A-737B, 751A-751B			
N-RN 2.	Rewrite expressions involving radicals and rational exponents using the properties of exponents.	<b>SE/TE:</b> 180, CB 185, 187, 27, 234-239, 262-266, 324, 388-389  <b>TE:</b> 239A-239B, 267A-267B			

<sup>1</sup> For some standards that appear in multiple courses (e.g., Algebra I and Algebra II), some examples included in the language of the standard that did not apply to this standards map were removed.

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<b>Cluster</b>	<b>Use properties of rational and irrational numbers.</b>				
N-RN 3.	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	<b>SE/TE:</b> 16-22, 23-28, 30-36, 38-44, CB 45  <b>TE:</b> 22A-22B, 28A-28B, 36A-36B, 44A-44B			
<b>Domain</b>	<b>QUANTITIES</b>				
<b>Cluster</b>	<b>Reason quantitatively and use units to solve problems.</b> [Foundation for work with expressions, equations and functions.]				
N-Q 1.	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. ★	<b>SE/TE:</b> 109-114, 116-121, CB 122-123, 124-129, 253-259, 336-343, 732-737, 746-751  <b>TE:</b> 114A-114B, 121A-121B, 129A-129B, 259A-259B, 737A-737B, 343A-343B, 751A-751B			
N-Q 2.	Define appropriate quantities for the purpose of descriptive modeling. ★	<b>SE/TE:</b> 116-121, 178-183, 262-267, 301-306, 561-566, 738-744  <b>TE:</b> 121A-121B, 183A-183B, 267A-267B, 306A-306B, 566A-566B, 744A-744B			

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N-Q 3.	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. ★	SE/TE: 137-143, 144-150, 387-392, 576-581, 582-588  TE: 143A-143B, 150A-150B, 392A-392B, 561A-561B, 588A-588B			
	<b>ALGEBRA</b>				
<b>Domain</b>	<b>SEEING STRUCTURE IN EXPRESSIONS</b>				
<b>Cluster</b>	<b>Interpret the structure of expressions</b> [Linear, exponential, quadratic.]				
A-SSE 1a.	Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients. ★	SE/TE: 4-9, 10-15, 46-52, 207-213, 262-267, 274-281, 308-314, 315-320, 322-328, 453-459, 460-466, 467-472, 512-517, 518-522, 523-528, 529-533, 546-552, 553-558, 576-581, 582-588  TE: 9A-9B, 15A-15B, 52A-52B, 213A-213B, 267A-267B, 281A-281B, 314A-314B, 320A-320B, 328A-328B, 459A-459B, 466A-466B, 472A-472B, 517A-517B, 522A-522B, 528A-528B, 533A-533B, 552A-552B, 558A-558B, 581A-581B, 588A-588B			

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A-SSE 1b.	Interpret expressions that represent a quantity in terms of its context. Interpret complicated expressions by viewing one or more of their parts as a single entity. <i>For example, interpret <math>P(1 + r)^n</math> as the product of <math>P</math> and a factor not depending on <math>P</math>.</i> ★	<b>SE/TE:</b> 4-9, 10-15, 46-52, 207-213, 262-267, 274-281, 308-314, 315-320, 322-328, 453-459, 460-466, 467-472, 512-517, 518-522, 523-528, 529-533, 546-552, 553-558, 576-581, 582-588  <b>TE:</b> 9A-9B, 15A-15B, 52A-52B, 213A-213B, 267A-267B, 281A-281B, 314A-314B, 320A-320B, 328A-328B, 459A-459B, 466A-466B, 472A-472B, 517A-517B, 522A-522B, 528A-528B, 533A-533B, 552A-552B, 558A-558B, 581A-581B, 588A-588B			
A-SSE 2.	Use the structure of an expression to identify ways to rewrite it.	<b>SE/TE:</b> 308-314, 315-320, 322-328, 523-528, 529-533  <b>TE:</b> 314A-314B, 320A-320B, 328A-328B, CB 511, 528A-528B, 533A-533B			
<b>Cluster</b>	<b>Write expressions in equivalent forms to solve problems.</b> [Quadratic and exponential.]				
A-SSE 3a.	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Factor a quadratic expression to reveal the zeroes of the function it defines. ★	<b>SE/TE:</b> 568-572, 576-581  <b>TE:</b> 572A-572B, 581A-581B			

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A-SSE 3b.	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines. ★	<b>SE/TE:</b> 568-572, 576-581  <b>TE:</b> 572A-572B, 581A-581B			
A-SSE 3c.	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Use the properties of exponents to transform expressions for exponential functions. . <i>For example, the expression <math>1.15^t</math> can be rewritten as <math>(1.15^{1/12})^{12t} \approx 1.012^{12t}</math> to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.</i> ★	<b>SE/TE:</b> 460-466, 568-572, 576-581  <b>TE:</b> 466A-466B, 572A-572B, 581A-581B			
<b>Domain</b>	<b>ARITHMETIC WITH POLYNOMIALS AND RATIONAL EXPRESSIONS</b>				
<b>Cluster</b>	<b>Perform arithmetic operations on polynomials.</b> [Linear and quadratic.]				
A-APR 1.	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	<b>SE/TE:</b> 486-491, 492-496, 498-503, 504-509  <b>TE:</b> 491A-491B, 496A-496B, CB 497, 503A-503B, 509A-509B			

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<b>Domain</b>	<b>CREATING EQUATIONS</b>				
<b>Cluster</b>	<b>Create equations that describe numbers or relationships.</b> [Linear, quadratic, and exponential (integer inputs only); for A.CED.3 linear only.]				
<b>A-CED 1.</b>	Create equations and inequalities in one variable <b>including ones with absolute value</b> and use them to solve problems. <i>Include equations arising from linear and quadratic functions, and simple rational and exponential functions.</i> <b>CA ★</b>	<b>SE/TE:</b> 53-58, 81-87, 88-93, 94-100, 102-108, 109-114, 124-129, 130-136, 171-177, 178-183, 186-192, 200-206, 207-213, 214-220, 301-306, 308-314, 460-466, 561-566, 568-572, 576-581, 582-588, 691-697  <b>TE:</b> 58A-58B, 87A-87B, 93A-93B, 100A-100B, 108A-108B, 114A-114B, 129A-129B, 136A-136B, 177A-177B, 183A-183B, 192A-192B, 206A-206B, 213A-213B, 220A-220B, 306A-306B, 314A-314B, 466A-466B, 566A-566B, 572A-572B, 581A-581B, 588A-588B, 697A-697B			

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A-CED 2.	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. ★	<b>SE/TE:</b> 61-66, 262-267, 301-306, 308-314, 315-320, 322-328, 453-459, 460-466, 546-552, 553-558, CB 573-574, 639-644, 698-704, 705-712, CB 713  <b>TE:</b> 60, 66A-66B, 267A-267B, 306A-306B, 314A-314B, 320A-320B, 328A-328B, 459A-459B, 466A-466B, 552A-552B, 558A-558B, 644A-644B, 704A-704B, 712A-712B			
A-CED 3.	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. <i>For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.</i> ★	<b>SE/TE:</b> 387-392, 394-399, 596-601  <b>TE:</b> 392A-392B, 399A-399B, 601A-601B			
A-CED 4.	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. <i>For example, rearrange Ohm's law <math>V = IR</math> to highlight resistance <math>R</math>.</i> ★	<b>SE/TE:</b> 109-114, 561-566  <b>TE:</b> 114A-114B, 566A-566B			



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<b>Domain</b>	<b>REASONING WITH EQUATIONS AND INEQUALITIES</b>				
<b>Cluster</b>	<b>Understand solving equations as a process of reasoning and explain the reasoning.</b> [Master linear; learn as general principle.]				
A-REI 1.	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.	<b>SE/TE:</b> 88-93, 94-100, 102-108, 109-114, 576-581  <b>TE:</b> CB 59, CB 80, 93A-93B, 100A-100B, CB 101, 108A-108B, 114A-114B, 581A-581B			
	<b>Solve equations and inequalities in one variable.</b> [Linear inequalities; literal that are linear in the variables being solved for; quadratics with real solutions.]				
A-REI 3.	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	<b>SE/TE:</b> 81-87, 88-93, 94-100, 102-108, 109-114, 124-129, 130-136, 164-170, 171-177, 178-183, 186-192, 194-199, 200-206  <b>TE:</b> 87A-87B, 93A-93B, 100A-100B, 108A-108B, 114A-114B, 129A-129B, 136A-136B, 170A-170B, 177A-177B, 183A-183B, CB 184-185, 192A-192B, 199A-199B, 206A-206B			

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<b>A-REI 3.1.</b>	<b>Solve one-variable equations and inequalities involving absolute value, graphing the solutions and interpreting them in context. CA</b>	<b>SE/TE:</b> 207-213, 220, 226, 227  <b>TE:</b> 213A-213B			
A-REI 4a.	Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation in $x$ into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.	<b>SE/TE:</b> 561-566, CB 567, 568-572, 576-581, 582-588  <b>TE:</b> 566A-566B, 572A-572B, 581A-581B, 588A-588B			
A-REI 4b.	Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g., for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula, and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers $a$ and $b$ .	<b>SE/TE:</b> 561-566, CB 567, 568-572, 576-581, 582-588  <b>TE:</b> 566A-566B, 572A-572B, 581A-581B, 588A-588B			
<b>Cluster</b>	<b>Solve Systems of Equations.</b> [Linear-linear and linear-quadratic.]				
A-REI 5.	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	<b>SE/TE:</b> 378-384  <b>TE:</b> 384A-384B			

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A-REI 6.	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	<b>SE/TE:</b> 364-369, CB 370-371, 372-377, 378-384, CB 385-386, 387-392  <b>TE:</b> 369A-369B, 377A-377B, 384A-384B, 392A-392B			
A-REI 7.	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.	<b>SE/TE:</b> 596-598  <b>TE:</b> 601A-601B			
<b>Cluster</b>	<b>Represent and solve equations and inequalities graphically.</b> [Linear and exponential; learn as general principle.]				
A-REI 10.	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	<b>SE/TE:</b> 61-66, 240-245, 246-251, 253-259  <b>TE:</b> 66A-66B, 245A-245B, 251A-251B, 259A-259B			
A-REI 11.	Explain why the $x$ -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ ; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions. ★	<b>SE/TE:</b> CB 260-261, CB 370, 453-459, 596-601  <b>TE:</b> 459A-459B, 601A-601B			

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A-REI 12.	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	SE/TE: 394-399, 400-405, CB 406  TE: 399A-399B, 405A-405B			
<b>FUNCTIONS</b>					
<b>Domain</b>	<b>INTERPRETING FUNCTIONS</b>				
<b>Cluster</b>	<b>Understand the concept of a function and use function notation.</b> [Learn as general principle; focus on linear and exponential and on arithmetic and geometric sequences]				
F-IF 1.	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If $f$ is a function and $x$ is an element of its domain, then $f(x)$ denotes the output of $f$ corresponding to the input $x$ . The graph of $f$ is the graph of the equation $y = f(x)$ .	SE/TE: 268-273  TE: 273A-273B			
F-IF 2.	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	SE/TE: 268-273  TE: 273A-273B			

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F-IF 3.	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. <i>For example, the Fibonacci sequence is defined recursively by <math>f(0) = f(1) = 1</math>, <math>f(n + 1) = f(n) + f(n - 1)</math> for <math>n \geq 1</math>.</i>	<b>SE/TE:</b> 274-281, 467-472  <b>TE:</b> 281A-281B, 472A-472B			
<b>Cluster</b>	<b>Interpret functions that arise in applications in terms of the context.</b> [Linear, exponential, and quadratic.]				
F-IF 4.	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</i> ★	<b>SE/TE:</b> 234-239, 240-245, 246-251, 308-314, 315-320, 322-328, 453-459, 460-466, 546-552, 553-558, 589-594, 705-712  <b>TE:</b> 239A-239B, 245A-245B, 251A-251B, 314A-314B, 320A-320B, 328A-328B, 459A-459B, 466A-466B, 552A-552B, 558A-558B, 594A-594B, 712A-712B			
F-IF 5.	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. <i>For example, if the function <math>h</math> gives the number of person-hours it takes to assemble <math>n</math> engines in a factory, then the positive integers would be an appropriate domain for the function.</i> ★	<b>SE/TE:</b> 253-259, 453-459, 546-552, 698-704  <b>TE:</b> 259A-259B, 459A-459B, 552A-552B, 704A-704B			

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F-IF 6.	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. ★	<b>SE/TE:</b> 294-300, CB 559-560  <b>TE:</b> 300A-300B			
<b>Cluster</b>	<b>Analyze functions using different representations.</b> [Linear, exponential, quadratic, absolute value, step, piecewise-defined.]				
F-IF 7a.	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima, and minima. ★	<b>SE/TE:</b> CB 307, 308-314, 315-320, 322-328, 346-350, 453-459, 460-466, 546-552, 553-558, CB 567  <b>TE:</b> 314A-314B, 320A-320B, 328A-328B, 350A-350B, 459A-459B, 466A-466B, 552A-552B, 558A-558B			
F-IF 7b.	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. ★	<b>SE/TE:</b> CB 307, 308-314, 315-320, 322-328, 346-350, CB 351, 453-459, 460-466, 546-552, 553-558, 639-644  <b>TE:</b> 314A-314B, 320A-320B, 328A-328B, 350A-350B, 459A-459B, 466A-466B, 552A-552B, 558A-558B, 644A-644B			

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F-IF 7e.	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. ★	<b>SE/TE:</b> CB 307, 308-314, 315-320, 322-328, 346-350, 453-459, 460-466, 546-552, 553-558  <b>TE:</b> 314A-314B, 320A-320B, 328A-328B, 350A-350B, 459A-459B, 466A-466B, 552A-552B, 558A-558B			
F-IF 8a.	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.	<b>SE/TE:</b> 460-466, 553-558, 568-572, 576-581  <b>TE:</b> 466A-466B, 558A-558B, 572A-572B, CB 573-574, 581A-581B			
F-IF 8b.	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions. <i>For example, identify percent rate of change in functions such as <math>y = (1.02)^t</math>, <math>y = (0.97)^t</math>, <math>y = (1.01)^{12t}</math>, and <math>y = (1.2)^{t/10}</math>, and classify them as representing exponential growth or decay.</i>	<b>SE/TE:</b> 460-466  <b>TE:</b> 466A-466B			

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F-IF 9.	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). <i>For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.</i>	<b>SE/TE:</b> 322-328, 453-459, 553-558  <b>TE:</b> 328A-328B, 459A-459B, 558A-558B			
<b>Domain</b>	<b>BUILDING FUNCTIONS</b>				
<b>Cluster</b>	<b>Build a function that models a relationship between two quantities.</b> [For F.BF.1, 2, linear, exponential, and quadratic.]				
F-BF 1a.	Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from a context. ★	<b>SE/TE:</b> 274-281, 308-314, 315-320, 322-328, 460-466, 467-472, 553-558  <b>TE:</b> 281A-281B, 314A-314B, 320A-320B, 328A-328B, 466A-466B, 472A-472B , 558A-558B			
F-BF 1b.	Write a function that describes a relationship between two quantities. Combine standard function types using arithmetic operations. <i>For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.</i> ★	<b>SE/TE:</b> 274-281, 308-314, 315-320, 322-328, 460-466, 553-558, 589-591  <b>TE:</b> 281A-281B, 314A-314B, 320A-320B, 328A-328B, 466A-466B, 558A-558B, 594A-594B			



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F-BF 2.	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. ★	SE/TE: 268-270 TE: 273A-273B			
<b>Cluster</b>	<b>Build new functions from existing functions.</b> [Linear, exponential, quadratic, and absolute value; for F.BF.4a, linear only.]				
F-BF 3.	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $kf(x)$ , $f(kx)$ , and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. <i>Include recognizing even and odd functions from their graphs and algebraic expressions for them.</i>	SE/TE: CB 307, 308-314, 315-320, 346-350, 460-466, 546-552, 553-558  TE: 314A-314B, 320A-320B, 350A-350B, 466A-466B, 552A-552B, 558A-558B			
F-BF 4a.	Find inverse functions. Solve an equation of the form $f(x) = c$ for a simple function $f$ that has an inverse and write an expression for the inverse.	SE/TE: CB 329			

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<b>Domain</b>	<b>LINEAR, QUADRATIC, AND EXPONENTIAL MODELS</b>				
<b>Cluster</b>	<b>Construct and compare linear, quadratic, and exponential models and solve problems.</b>				
F-LE 1a.	Distinguish between situations that can be modeled with linear functions and with exponential functions. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals. ★	SE/TE: 589-594  TE: 594A-594B			
F-LE 1b.	Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another. ★	SE/TE: 294-300, 589-594  TE: 300A-300B, 594A-594B			
F-LE 1c.	Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another. ★	SE/TE: 460-466, 589-594  TE: 466A-466B, 594A-594B			

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F-LE 2.	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). ★	<b>SE/TE:</b> 274-281, 308-314, 315-320, 322-328, 453-459, 467-472, 589-594  <b>TE:</b> 281A-281B, 314A-314B, 320A-320B, 328A-328B, 459A-459B, 472A-472B, 594A-594B			
F-LE 3.	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function. ★	<b>SE/TE:</b> CB 559-560, 589-594  <b>TE:</b> 594A-594B			
<b>Cluster</b>	<b>Interpret expressions for functions in terms of the situation they model.</b>				
F-LE 5.	Interpret the parameters in a linear or exponential function in terms of a context. ★ [Linear and exponential of form $f(x) = b^x + k$ ]	<b>SE/TE:</b> 308-314, 315-320, 322-328, 336-343, 460-466  <b>TE:</b> 314A-314B, 320A-320B, 328A-328B, 343A-343B, 466A-466B			
<b>F-LE 6.</b>	<b>Apply quadratic functions to physical problems, such as the motion of an object under the force of gravity. ★ CA</b>	<b>SE/TE:</b> 546-549, 553-555  <b>TE:</b> 558A-558B			

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<b>STATISTICS AND PROBABILITY</b>					
<b>Domain</b>	<b>INTERPRETING CATEGORICAL AND QUANTITATIVE DATA</b>				
<b>Cluster</b>	<b>Summarize, represent, and interpret data on a single count or measurement variable.</b>				
S-ID 1.	Represent data with plots on the real number line (dot plots, histograms, and box plots). ★	SE/TE: 732-737, 746-751 TE: 737A-737B, 751A-751B			
S-ID 2.	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets. ★	SE/TE: 738-744, CB 745, 746-751 TE: 744A-744B, 751A-751B			
S-ID 3.	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers). ★	SE/TE: 738-744 TE: 744A-744B			
<b>Cluster</b>	<b>Summarize, represent, and interpret data on two categorical and quantitative variables.</b> [Linear focus, discuss general principle.]				
S-ID 5.	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data. ★	SE/TE: 732-737, CB 752 TE: 737A-737B			

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S-ID 6a.	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. <i>Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.</i> ★	SE/TE: 336-343, 589-594  TE: 343A-343B, 594A-594B, CB 595			
S-ID 6b.	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. Informally assess the fit of a function by plotting and analyzing residuals. ★	SE/TE: 336-343, CB 344-345, CB 595  TE: 343A-343B			
S-ID 6c.	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. Fit a linear function for a scatter plot that suggests a linear association. ★	SE/TE: 336-343  TE: 343A-343B			
<b>Cluster</b>	<b>Interpret linear models.</b>				
S-ID 7.	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. ★	SE/TE: 336-343  TE: 343A-343B			

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S-ID 8.	Compute (using technology) and interpret the correlation coefficient of a linear fit. ★	SE/TE: 336-343 TE: 343A-343B			
S-ID 9.	Distinguish between correlation and causation. ★	SE/TE: 336-343 TE: 343A-343B			
<b>MATHEMATICAL PRACTICES</b>					
MP 1.	Make sense of problems and persevere in solving them.	The Pull It All Together exercises at the end of each chapter give students the opportunity to think through non-routine problems that require knowledge from the given chapter and earlier chapters. The Plan and Think elements in each lesson of the textbook give students the tools to attack new problems. For examples, see pages SE/TE: 54, 89, 274, 400, 462, 640-641			

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MP 2.	Reason abstractly and quantitatively.	The example Problems that have Think-Write or Know-Need-Plan boxes help students develop their ability to understand the math at hand and to understand how to plan to solve future problems. Example Problems help students understand how to approach real-world situations by expressing words or situations as expressions and equations. For examples, see lessons: <b>SE/TE:</b> 1-8, 2-5, 3-4, 4-7, 5-7, 7-7, 9-4, 10-3, 11-5, 12-3			
MP 3.	Construct viable arguments and critique the reasoning of others.	The Solve It!/Getting Ready! exercise opening each lesson allows students to think about ideas that will be extended in the lesson. These problems particularly encourage students to think about mathematical situations in more than one way and to share their thinking with others. This allows students to analyze the thinking of others as well as their own thinking. For examples, see pages: <b>SE/TE:</b> 53, 171, 268, 390, 392, 495, 687, 780, 781			

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MP 3.1	Students build proofs by induction and proofs by contradiction. CA [for higher mathematics only].	N/A			
MP 4.	Model with mathematics.	Students have an opportunity to use mathematics to model real-world situations throughout the text. For examples, see lessons: <b>SE/TE:</b> 1-2, 2-4, 3-4, 4-5, 5-4, 6-4, 7-7, 9-4, 10-6, 11-6			
MP 5.	Use appropriate tools strategically.	Concept Bytes require students to use manipulatives and technology tools to understand concepts. They can use these tools as they work on their homework exercises. In addition, many lessons have Dynamic Activities that give students access to online tools especially developed for the Pearson program. For examples, see pages: <b>SE/TE:</b> 59, 101, 120, 260			



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MP 6.	Attend to precision.	The textbook contains Reasoning, Error Analysis, and Writing exercises. In these exercises, students analyze and communicate mathematical concepts and use vocabulary and mathematical symbols accurately. For examples, see lessons: <b>SE/TE:</b> 1-3, 2-6, 3-7, 4-6, 5-7, 6-4, 7-7, 8-1, 9-4, 10-3, 11-5, 12-5			
MP 7.	Look for and make use of structure.	The Think and Plan elements for each example Problem encourage students to actively look for similarities and differences between mathematical concepts. By responding to the hints provided by the Think and Plan elements, students will require less assistance, developing their own abilities to look for patterns and structure. For examples, see lessons: <b>SE/TE:</b> 1-1, 1-6, 2-10, 3-6, 4-3, 5-4, 6-3, 7-1, 8-7, 9-5, 10-3, 11-3, 12-6			

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MP 8.	Look for and express regularity in repeated reasoning.	Algebra is the language used to express general methods rather than repeated arithmetic operations. Throughout the textbook, students grow in their ability to look for and use algebra to model situations and make reasonable generalizations. For examples, see lessons: <b>SE/TE:</b> 1-1, 2-5, 3-7, 4-9, 5-1, 6-3, 7-3, 8-3, 9-6, 10-6, 11-6, 12-8			