	Year at a Glance: Math - Algebra 1 Student Lear	ning O	bjectiv	ves Clu	istered	l by Uı	nit			1				
OCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.			Unit 1									Un	it 4
							Ur	nit 2			Unit 3		Other No	onlinear
Key	Focus - Explicit Instruction and Assessment		Mode Ec	ling with L uations a	_inear nd	Linear a	nd Expo	nential Mo	odeling:	Quad	ratic Mod	elina	Graphs a	and One
·	Revisited and Reinforced			nequalities		Functior	ns and Bi	variate St	atistics				Varia Statis	
	Not Addressed in the Unit													
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
	THE REAL NUMBER SY	STEM				1		1	1	1				
N.RN.A.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. For example, we define 5 1/3 to be the cube root of 5 because we want (5 1/3)3 = 5(1/3) 3 to hold, so (5 1/3)3 must equal 5.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.RN.A.2 Rewrite expressions involving radicals and rational exponents using the properties of exponents.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	WALT explain why the sum and product of two rational numbers is rational	1						r	1		r		-	
N.RN.B.3	WALT explain why the sum and product of two rational numbers is rational WALT explain that the sum of a rational number and irrational number is	-												
Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational	WALT explain that the sound of a rational number and irrational number is WALT explain that the product of a nonzero rational number and irrational	1												
number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	number is irrational	1												
	QUANTITIES													
N.Q.A.1	WALT use units as a way to understand problems and to guide the solution of	1												
Use units as a way to understand problems and to guide the	WALT interpret units consistently in formulas	1												
solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and	WALT choose and interpret the scale and the origin in graphs	1												
the origin in graphs and data displays.	WALT represent data using box plots on the real number line and choose an	4												
							•					•		
N.Q.A.2 Define appropriate quantities for the purpose of descriptive modeling.	WALT define appropriate quantities to be used in descriptive modeling	1												
N.Q.A.3	WALT choose an appropriate level of accuracy based on the limitations on	1												
	THE COMPLEX NUMBER	SYSTEM	[											
N.CN.A.1	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.CN.A.2 Use the relation $i2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.CN.A.3 (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													

OCUMENT KEY: WALT (That) indicates a concept	. WALT (To) indicates a skill.												Uni	t4
				Unit 1			Uni	it 2			Unit 3			
W.	Focus - Explicit Instruction and Assessment		Mode	ing with I	Linear	l incar a	nd Expor	ontial Mr	odolina				Other No Graphs a	nlinear
Key	Revisited and Reinforced			uations a nequalitie		Linear a Function	is and Biv	ariate St	atistics	Quad	ratic Mod	eling	Graphs a Varia	ble
	Not Addressed in the Unit			lequalitie	5								Statis	tics
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
N.CN.B.4 (+) Represent complex numbers on the complex plane in ectangular and polar form (including real and imaginary mbers), and explain why the rectangular and polar forms of a given complex number represent the same number.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.CN.B.5	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.CN.B.6 -) Calculate the distance between numbers in the complex ane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.CN.C.7	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.CN.C.8	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
				1	1	1			1	1		1	, i	
N.CN.C.9	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	VECTOR and MATRIX QU.	ANTITIES												
N.VM.A.1 (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., v,  v ,   v  , v)	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.A.2 (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.A.3	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.B.4	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.B.5 (+) Multiply a vector by a scalar. a. Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(vx, vy) = cvx, cvy)$ . Compute the magnitude of a scalar multiple $cv$ using $  cv  $  c v. Compute the direction of $cv$ knowing that when $ c v)$ , the direction of $cv$ is either along $v$ (for $c > 0$ ) or against $v(for c < 0).$	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.C.6	NOTE: Not addressed in the Algebra 1 Instructional Unit.													

	Year at a Glance: Math - Algebra 1 Student Learn	ung O	bjectiv	es Clu	isterec	l by Uı	nit			1				
OCUMENT KEY: WALT (That) indicates a concept	. WALI (10) Indicates a skill.			Unit 1				it 2					Uni	it 4
	Focus - Explicit Instruction and Assessment		Model	ing with L	inear						Unit 3		Other No	
Key	Revisited and Reinforced		Eq	uations a	nd	Linear a Function	nd Expor	nential Mo variate St	odeling: atistics	Quad	ratic Mod	eling	Graphs a Varia	Ind One
	Not Addressed in the Unit		Ir	nequalities	S								Statis	
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
N.VM.C.7 (+) Multiply matrices by scalars to produce new matrices, e. g., as when all of the payoffs in a game are doubled.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.C.8 (+) Add, subtract, and multiply matrices of appropriate dimension.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.C.9 (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.C.10 (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.C.11 (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
N.VM.C.12 (+) Work with 2 × 2 matrices as a transformations of the plane, and interpret the absolute value of the determinant in terms of area.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	SEEING STRUCTURE in EXPI	RESSIO	NS											
A.SSE.A.1 Interpret expressions that represent a quantity in terms of its context.	WALT interpret parts of an expression, such as terms, factors, and coefficients, in context	2												
a. Interpret parts of an expression, such as terms, factors, and coefficients. b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret P(1+r)n as the product of P and a factor not depending on P.	WALT interpret the meaning of a complicated expression by viewing one or more parts as a single quantity	2												
A.SSE.A.2 Use the structure of an expression to identify ways to rewrite it. For example, see $x4 - y4$ as $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$ .	A.SSE.A.2: WALT use the structure of an expression to identify ways to rewrite it	3												

	Year at a Glance: Math - Algebra 1 Student Lear	ning O	bjectiv	ves Clu	istered	<b>l by U</b> i	nit								
DOCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.			Unit 1									Uni	t 4	
							Un	it 2			Unit 3		Other No	nlinear	
Key	Focus - Explicit Instruction and Assessment Revisited and Reinforced	<b></b>		ing with I uations a			and Expor			Quad	ratic Mod	eling	Graphs a	nd One	
	Not Addressed in the Unit			nequalitie		Function	ns and Bi	variate St	atistics			Ŭ	Varia Statis		
		<b>T</b> T <b>•</b> /		4.0	10		0.0		0.0					4.0	
NJSLS	SLO WALT factor a quadratic expression in order to reveal the zeros of the function	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B	
A.SSE.B.3	it defines	3													
Choose and produce an equivalent form of an expression to															
reveal and explain properties of the quantity represented by the expression.	WALT complete the square in a quadratic expression to reveal the maximum or														
a. Factor a quadratic expression to reveal the zeros of the	minimum value of the function it defines	3													
function it defines. b. Complete the square in a quadratic expression to reveal															
the maximum or minimum value of the function it defines.	WALT use the properties of exponents to rewrite exponential expressions the														
c. Use the properties of exponents to transform expressions for exponential functions.	define an exponential function in order to reveal information in the context of the problem or situation														
For example: the expression $1.15t$ can be rewritten as $(1.15)$		2													
1/12t to reveal the approximate equivalent monthly interest rate															
if the annual rate is 15%.															
				I		1		I		• •					
A.SSE.B.4															
A.SSE.D.4 Derive and/or explain the formula for the sum of a finite															
geometric series (when the common ratio is not 1), and use	NOTE: Not addressed in the Algebra 1 Instructional Unit.														
the formula to solve problems. For example, calculate mortgage payments.															
	ARITHEMATIC with POLYNOMIALS and F	ATION	AL FUN	ICTION	IS										
A ADD A 1	WALT polynomials form a system comparable to the integers	3				1			1						
A.APR.A.1 Understand that polynomials form a system analogous to the	WALT the sum, difference, and product of two polynomials is a polynomial	3													
integers, namely, they are closed under the operations of	WALT add and subtract polynomials	3													
addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	WALT multiply polynomials	3													
							I								
A.APR.B.2															
A.AFK.D.2 Know and apply the Remainder Theorem: For a polynomial	NOTE: Not addressed in the Algebra 1 Instructional Unit.														
p(x) and a number $a$ , the remainder on division by $x - a$ is $p$	NOTE. Not dadressed in the Algebra 1 Instructional Unit.														
(a), so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$ .															
A.AI K.D.J															
Identify zeros of polynomials when suitable factorizations	WALT identify the zeros of a polynomial function when suitable factorizations WALT use the zeros to construct a rough graph of the function defined by the	4								-					
are available, and use the zeros to construct a rough graph	WALT use the zeros to construct a rough graph of the function defined by the	4					L			L					
A.APR.C.4															
Prove polynomial identities and use them to describe numerical															
relationships. For example, the difference of two squares; the sum and	NOTE: Not addressed in the Algebra 1 Instructional Unit.														
difference of two cubes; the polynomial identity $(x^2 + y^2)^2 =$															
(x2 - y2) 2 + (2xy) 2 can be used to generate Pythagorean triples															
A.APR.C.5	NOTE Not addressed in the Alexbury Lington of the U.S.			1			1		1						
A.APK.C.3	NOTE: Not addressed in the Algebra 1 Instructional Unit.						L								
A.APR.D.6 Rewrite simple rational expressions in different forms; write															
a(x)/b(x) in the form $q(x) + r(x)/b(x)$ , where $a(x)$ , $b(x)$ , $q(x)$ ,	NOTE: Not addressed in the Algebra 1 Instructional Unit.														
and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$ , using inspection, long division, or, for the	11012. Noi dudressed in me Argeord 1 instructional Onti.														
degree of $\partial(x)$ , using inspection, long division, or, for the more complicated examples, a computer algebra system.															
						I	L		L	I		L			

OCUMENT KEY: WALT (That) indicates a concept	Year at a Glance: Math - Algebra 1 Student Learn													
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	Focus - Explicit Instruction and Assessment		Mode	ling with	Linoar						Unit 3		Other Nonl	
Key	Revisited and Reinforced		Ec	uations a	and		ind Expor			Quad	ratic Mod	eling	Graphs and Variabl	
	Not Addressed in the Unit		I	nequalitie	es	1 unction		vanate St	ausucs				Statistic	
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
A.APR.D.7	SLO	Units	IA	ТВ		24	20	20	20	JA	30	30	4A	40
(+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressione	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	CREATING EQUATIO	NS												
	WALT create linear equations and inequalities in one variable to model a	1			1									
A.CED.A.1	WALT use linear equations and inequalities in one variable to model a	1												
Create equations and inequalities in one variable and use them to solve problems. Include equations arising from	WALT create exponential equations and inequalities in one variable to model a	2												
them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and	WALT create exponential equations and inequalities in one variable to model a WALT create quadratic equations in one variable to model a problem or	3			-									
exponential functions.	WALT cleare quadratic equations in one variable to model a problem of WALT use quadratic equations in one variable to solve problems	3			-					-				
	mer alle quatrane equations in one variable to solve problems	3	I		1	1				I			II	
A.CED.A.2	WALT create linear equations to represent relationships between two or more	1					1							
Create equations in two or more variables to represent	WALT create finear equations to represent relationships between two of more WALT graph linear equations on the coordinate plane to represent relationships	1												
relationships between quantities; graph equations on	WALT graph linear equations on the coordinate plane to represent relationships WALT graph linear equations on the coordinate plane to represent relationships	1												
coordinate axes with labels and scales.						1				I	I	I		
A.CED.A.3	WALT constraints reflect conditions in the modeling process	1				1	1		1	[				
Represent constraints by equations or inequalities, and by	WALT represent a constraint as an equation or inequality	1												
systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling	WALT interpret possible solutions as viable or nonviable in the modeling	1												
context.	WALT represent constraints by a system of equations in the modeling context	1												
For example, represent inequalities describing nutritional and	WALT represent constraints by a system of inequalities in the modeling context WALT represent constraints by a system of inequalities in the modeling context	1												
cost constraints on combinations of different foods.	which represent constraints of a system of inequalities in the incusing content	-		I		<b>!</b>	I			I	I			
A.ACD.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R.	WALT rearrange formulas to isolate a variable of interest, using the same reasoning as in solving equations	1												
	REASONING with EQUATIONS and	INFOLL	ALITH	25										
	WALT explain each step in solving a simple equation, assuming it has a													
A.REI.A.1 Explain each step in solving a simple equation as following	solution	1												
from the equality of numbers asserted at the previous step, arting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.	WALT construct viable arguments to justify a solution method	1												
A.REI.A.2														
Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
A.REI.B.3	WALT solve linear equations and inequalities in one variable	1												
Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	WALT solve one-variable linear equations that have coefficients represented by	1												
A.REI.B.4	WALT solve quadratic equations by completing the square	3												
Solve quadratic equations in one variable.	WALT use completing the square to rewrite a quadratic equation in the form $(x)$	3												
. Use the method of completing the square to transform any	WALT use the form $(x - p)^2 = q$ to derive the quadratic formula	3												
uadratic equation in x into an equation of the form $(x - p)^2$	F/ T to be the quantum formation			1	1	1	1		1	1				

	Year at a Glance: Math - Algebra 1 Student Learr	ing O	bjectiv	<u>ves Clu</u>	istered	l by Uı	nit							
OCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.			Unit 1									Uni	it 4
							Uni	it 2			Unit 3		Other No	nlinoar
Key	Focus - Explicit Instruction and Assessment			ing with L uations a				nential Mo		Quad	ratic Mod	elina	Graphs a	Ind One
1109	Revisited and Reinforced			nequalitie		Function	ns and Biv	variate St	atistics	Quad		enng	Varia Statis	
	Not Addressed in the Unit			,										
NJSLS formula from this form.	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
Solve quadratic equations by inspection (e.g., for $x^2 = 49$ ), taking square roots, completing the square, the quadratic ormula and factoring, as appropriate to the initial form of he equation. Recognize when the quadratic formula gives mplex solutions and write them as $a \pm bi$ for real numbers a and $b$ .	WALT recognize, using the discriminant, when the quadratic formula gives complex solutions and write them as $a \pm bi$	3												
A.REI.C.5	WALT transform a system of two equations in two variables into simpler	1							1	1		1		
rove 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.	WALT prove that through elimination. the transformed system will produce the same solution as the original system	1												
A.REI.C.6 olve systems of linear equations exactly and approximately e.g., with graphs), focusing on pairs of linear equations in two variables.	WALT solve a system of linear equations in two variables exactly and approximately	1												
A.REI.C.7	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
<u>A.REI.C.8</u>	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
A.REI.C.9	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
A.REI.D.10 nderstand 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).	WALT understand that the graph of an equation, in two variables, is the set of all solutions, often forming a curve	1												
A.KEI.D.II	WALT in cases where $f(x)$ and/or $g(x)$ are linear, polynomial, absolute value,	4							1	1		1		
Explain why the x-coordinates of the points where the raphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ ; find the solutions oproximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. nelude cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic	WALT in cases where cases where $f(x)$ and/or $g(x)$ are linear, polynomial, absolute value, and exponential, find approximate solutions using technology to graph the functions, make tables, and find successive approximations in order to find the solution of the equation $f(x) = g(x)$	4												
	WALT rgraph a system of inequalities in two variables	1												
A.REI.D.12 raph the solutions to a linear inequality in two variables as	WALT graph the solution set to a system of linear inequalities as the	1												
hap in the sources to a micro including in the case of a strict nequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	WALT graph the solution of a linear inequality in two variables as a half plane	1												
	INTERPRETING FUNCT	IONS		_			_	_		_	_			
nderstand that a function from one set (called the domain)	WALT the domain is the set of all possible input values and the range is the set	2												
o another set (called the range) assigns to each element of	WALT in a function, each element of the domain is assigned to exactly one	2			-					+				
the domain exactly one element of the range. If f is a	WALT $f(x)$ denotes the output for a given input value of x, for a function f	2												
unction and $x$ is an element of its domain, then $f(x)$ denotes e output of f corresponding to the input $x$ . The graph of $f$ is		2												
F.IF.A.2 Jse function notation, evaluate functions for inputs in their	WALT use function notation to find range values for inputs from a function's	2												
se function notation evaluate functions for inputs in their	WALT interpret statements that use function notation in terms of a context				1				-	1		-		

showing end behavior. maxima or minima	OCUMENT KEY: WALT (That) indicates a concep Key	Focus - Explicit Instruction and Assessment Revisited and Reinforced Not Addressed in the Unit		Eq Ir	Unit 1 ling with l luations a nequalitie	nd s	Functio	ind Expor	iit 2 nential Mc variate St	atistics		Unit 3 ratic Mod		Uni Other No Graphs a Varia Statis	nlinear nd One ble tics
is a value of the sequence is different controls when there are the sequence is a different control is a value of the sequence is a different control is a value different control is a value different control is a different control is a value different control is a value different control is a value different control is a different control is a value different control is a different control is a value different control is	NJSLS		Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
unumation: interpret koy features of graphs and tables in trans of the quantifier relationship, interpret koy features of graphs and tables that model a linear or graph and table that model a linear or graph and tables that model a linear or graphs and tables that model a linear or graph and table the quantifiative relationship i decribes in the context of the problem**       3       Image: Graph and tables that model a quadratic function to is graph and table the quadratic function to is graph and table the quadratic function, represented a linear or graphs and table the average rate of change of a quadratic function, represented a linear or graph function with the vertice for a graph function or file problem**       3       Image: Graph and table tables that model a quadratic function, represented a linear or graph and table the average rate of change of file problem**       3       Image: Graph and table tables table t	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For ample, the Fibonacci sequence is defined recursively by $f(0) =$		2												
upuantifies, interpret key features of graphs and tables in the road of a parater by early a verbal description of the relationship, intercept key features of graphs and tables in the road of a parater by early and the set of the road of a parater by early and the set of the road of the relationship intercept key features of graphs and tables in the road of a parater by early and the relationship in description of the relationship intercept key features of graphs and tables in the road of a parater by early and the relationship intercept key features of graphs and tables intercept key features of graphy feature key features of featurg features	For a function that models a relationship between two	WALT the key features of a graph include intercepts: intervals where the	2								1		[		
Items the quantity, and static graphs storing, by the quantity or negative, rating points, and static graphs and tables that model a linear or 2       2       0       0       0       0         WALT structure provide the matrice in the provide the matrice in the provide the matrice in the structure of the provide the matrice in the structure of the stru	quantities, interpret key features of graphs and tables in														
Here fundle: intercepts: intervals where the functions fram model a quadratic entionship, interpret key features       3       0															
increasing leasing of deriving and share and			3												
Additional and informations. Symmetrices, consideration, mail in the second se															
Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	axiniums and minimums, symmetries, end benavior, and		11		1	I	1	I	I					II	
Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and to the quantitative relationship it describes in the context of the problem ** a graph and the dual dual to the dual dual to the dual to	FIFB 5	WALT relate the domain of a function to its graph	2		1		1				1				
For example, if the function for grees or the mainser of present- positive integers would be an appropriate domain for the positive integers would be an appropriate domain for the protein set would be an appropriate domain of a quadratic function, represented set field interval. Estimate the average rate of change of a quadratic function, represented wALT calculate the average rate of change of linear and exponential functions, the average rate of change of linear and exponential functions, protein set would be appropriate domain down key factures of the graph, by hand in simple cases an using technology for more complicated cases. At an a Coraph interve of the proteins and above key functions, including step functions and above key functions, including step functions and above key for the cores domain of a protein set would be core and present functions, and show key features of the graph aboving and behavior. Coraph rational functions, showing intercepts, maxim, and mining behavior. Coraph rational functions, showing intercepts, maxim, and mining the cores of cub root, and present defined interve of the graph aboving and behavior. Coraph rational functions, showing intercepts, maxim, and mining the cores of the protein set would behavior. Showing end behavior. Coraph rational functions, showing intercepts and would for cortrains	Relate the domain of a function to its graph and, where	WALT relate the domain of a function to the quantitative relationship it	2												
F.IF.B.6       WALT estimate the average rate of change of a quadratic function, represented       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic functions, a constraint of the average rate of change of linear and exponential functions       2       Image: Constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of the graph       2       Image: Constraint of the average rate of change of linear and exponential functions, and an average rate of change of the graph       2       Image: Constraint of the average rate of change of linear and exponential functions, and average rate of change of the graph       2       Image: Constraint of the average rate of change of the graph	For example, if the function h(n) gives the number of person- hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the		3												
F.IF.B.6       WALT estimate the average rate of change of a quadratic function, represented       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic function, defined by       3       Image: Constraint of the average rate of change of a quadratic functions, a constraint of the average rate of change of linear and exponential functions       2       Image: Constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of linear and exponential functions, a constraint of the average rate of change of the graph       2       Image: Constraint of the average rate of change of linear and exponential functions, and an average rate of change of the graph       2       Image: Constraint of the average rate of change of linear and exponential functions, and average rate of change of the graph       2       Image: Constraint of the average rate of change of the graph			11		1			1							
Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a graph of the average rate of change of linear and exponential functions. 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4															
function (presented symbolically or as table) over a graph sectified interval. Estimate the rate of change form a graph sectified interval. Estimate the rate of change for mark constraints in the average rate of change of linear and exponential functions.       2       0			-												
wALT exactuate the average rate of change of linear and exponential functions.       2       1 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>															
WALT calculate the average rate of change of linear and exponential function,       2       0 <th0< td=""><td>becified interval. Estimate the rate of change from a graph.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th0<>	becified interval. Estimate the rate of change from a graph.														
F.F.C.7       Graph functions expressed symbolically and show key features of the graph.       2 <t< td=""><td>*</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	*														
FIF.C.7       graph       2       2         Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.★       a. Graph fluncer and quadratic functions and show intercepts, maxima, and minima.       WALT graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions, including step functions and absolute value functions, identifying zeros when suitable factorizations are available, and showing end behavior.       WALT graph piecewise-defined functions, including step functions and show key features of the graph       4         WALT graph piecewise-defined functions, identifying zeros and usymptotes when suitable factorizations are available, and showing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, showing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, inxima or minima         WALT graph piecewise-defined functions, identifying zeros and usymptotes when suitable factorizations are available, and showing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, inxima or minima       4         WALT graph piecewise-defined functions, showing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, inxima or minima       3       4		WALT calculate the average rate of change of linear and exponential function,	2												
technology for more complicated cases. ★       wAL1 graph square root, cube root, and show key features of the graph         a. Graph linear and quadratic functions and show intercepts, maxima, and minima.       wAL1 graph square root, cube root, and show key features of the graph         b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions, identifying zeros when suitable factorizations are available, and showing end behavior.       WALT graph piecewise-defined functions, including step functions and absolute value functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, maxima or minima       4         WALT graph quadratic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and       WALT graph quadratic functions expressed symbolically and show intercepts, maxima or minima       4	Graph functions expressed symbolically and show key		2												
functions.       functions.         c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.       d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and howing intercepts and end behavior.       4         d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and howing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, maxima or minima         e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and       3	technology for more complicated cases.★ a. Graph linear and quadratic functions and show intercepts, maxima, and minima. b. Graph square root, cube root, and piecewise-defined	WALT graph square root, cube root, and show key features of the graph	4												
asymptotes when suitable factorizations are available, and showing end behavior.       WALT graph quadratic functions expressed symbolically and show intercepts, maxima or minima         e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and       3	functions. c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.		4												
	symptotes when suitable factorizations are available, and showing end behavior. e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and		3												
WALT use the process of factoring in a quadratic function to show and interpret <b>3</b>		WATT - 4				-	1					1			

	Year at a Glance: Math - Algebra 1 Student Learn	ning O	bjectiv	es Clu	istered	l by Uı	nit								
DOCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.			Unit 1									Uni	it 4	
							Un	it 2			Unit 3		Other No	nlinoar	
Key	Focus - Explicit Instruction and Assessment		Model	ing with L uations a	Linear			nential Mo		Quad	ratic Mod	elina	Graphs a	ind One	
5	Revisited and Reinforced			nequalitie		Functior	ns and Biv	variate St	atistics	Quuu		cing	Varia Statis		
	Not Addressed in the Unit								,			,			
NJSLS F.IF.C.8	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B	
<ul> <li>Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.</li> <li>a. 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.</li> <li>b. Use the properties of exponents to interpret expressions for exponential functions.</li> <li>For example, identify percent rate of change in functions such as y = (1.02)t, y = (0.97)t, y = (1.01)12t, y = (1.2)t/10, and classify them as representing exponential growth or decay.</li> </ul>	WALT use the process of completing the square in a quadratic function to show extreme values and symmetry of the graph and interpret these in the context of the problem	3													
F.IF.C.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in	WALT compare properties of two quadratic functions each represented in different ways (numerically, graphically, algebraically, or verbally)	3													
tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.	WALT compare properties of two exponential functions each represented in different ways (numerically, graphically, algebraically, or verbally)	2													
	BUILDING FUNCTIONS					-									
F.BF.A.1	WALT write a function that describes a linear relationship between two	2													
Write a function that describes a relationship between two	WALT write a function that describes an exponential relationship between two	2													
quantities.	WALT determine an explicit expression for a function that models a linear or	2													
a. Determine an explicit expression, a recursive process, or steps for calculation from a context.	WALT determine a recursive process for a function that model a linear or	2													
steps for calculation from a context.	WALT determine a set of steps for calculation for a function that models a	2													
				·						. <u> </u>					
F.BF.A.2	NOTE: Not identified in the Instructional Units.														1
r.pr.p.,				1											
Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , k	WALT identify the effect on the graph of linear and exponential functions by	2, 3													1
f(x), f(kx), and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs.	WALT identify the effect on the graph of linear and exponential functions by	2, 3													1
Experiment with cases and illustrate an explanation of the	WALT find the value of k given graphs of linear and exponential functions	2, 3													-
effects on the graph using technology. Include recognizing	WALT experiment with all cases, $f(x) + k$ , $f(x + k)$ , $kf(x)$ and $f(kx)$ , and	2, 3													1
even and odd functions from their graphs and algebraic	WALT recognize even and odd functions from their graphs and algebraic	2, 3													1
	1			1						1					
<ul> <li>F.B.F.B.4 Find inverse functions.</li> <li>a. Solve an equation of the form f(x) = c for a simple function if that has an inverse and write an expression for the inverse. For example, f(x) = 2 x3 or f(x) = (x+1)/(x-1) for x ≠ 1.</li> <li>b. (+) Verify by composition that one function is the inverse of another.</li> <li>c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.</li> <li>d. (+) Produce an invertible function from a non-invertible function by restricting the domain.</li> </ul>	NOTE: Not addressed in the Algebra 1 Instructional Unit.														

Focus - Explicit Instruction and Assessment     Unit 1     Unit 2     Unit 3     Other N       Key     Revisited and Reinforced     Modeling with Linear Equations and Exponential Modeling: Functions and Bivariate Statistics     Quadratic Modeling Var     Quadratic Modeling Var		Year at a Glance: Math - Algebra 1 Student Lear	ning O	bjectiv	ves Ch	ustered	l by Ui	nit							
Kry       Unit       Unit      <	OCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.			l Init 1									Unit	4
Kry         President and Reference (not Addressed in the Luit)         Distribution of the State of the Luit)         Distribution of the Luit of t								Un	it 2			Unit 3		Other Non	linear
No.Ls         Construction         Description         Description <thdescription< th=""> <thdescription< th=""> <thd< th=""><th>Key</th><th>•</th><th></th><th>Mode Ec</th><th>ling with quations a</th><th>Linear and</th><th></th><th></th><th></th><th></th><th>Quad</th><th>ratic Mod</th><th>eling</th><th>Graphs an</th><th>d One</th></thd<></thdescription<></thdescription<>	Key	•		Mode Ec	ling with quations a	Linear and					Quad	ratic Mod	eling	Graphs an	d One
NUELS         SLO         Units         14         18         1C         2A         2B         2C         2D         3A         3B         3C         4A           (1) One base models model generation and processes and one sequential functions. regulant this is using production and the propertial functions. regulant this is using production and regulantic comparison and the regulantic regulantic model within the regulantic reg	-						Function	is and Bi	variate St	tatistics			Ŭ	Variab Statisti	
FBEBS       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Control of the Control of	NHOL O		<b>T</b> T •/	4.4	40	40	0.4	00	00	00	0.4	0.0	- 20		40
10) Use in lorver elaborable hoveres exponentia and constructional use:       1		SLO	Units	1A	18	10	2A	2B	20	20	3A	38	30	4A	4B
Interaction and with exponential functions.       WALT recognize statuations in which a quantity theory of quantity chronos quantity chr	(+) Use the inverse relationship between exponents and logarithms to solve problems involving logarithms and	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
Interfactions and with support of a difference with prove that is an interfactor is web or a quantify theory by a constant 2 p 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Linear. Ouadratic, and Exponen	tial Mod	els											
Prove that laterar functions grow by equal differences are proven and and exponential functions are which a quantity grow or decay by a contain 2 2       Image: Contained the contained functions are which a quantity grow or decay by a contain 2 2       Image: Contained the contained functions are which a quantity grow or decay by a contained to a province of the conta province of the contained to a province of th	linear functions and with exponential functions.				1		1				1				
Image: regular factors over qual intervals.       WALT reduce in a modeled with linear       2       1       1       1         Intergrate intervals is which a quantify increasing in which a quantify interval in a transform is marked a quantify increasing intervals in which a quantify increasing intervals in which a quantify increasing intervals in the set of a quantify increasing intervals increases in the set of a quantify increasing intervals increases in the set of a quantify increasing intervals increases in the set of a quantify increasing intervals increases in a quantify increases intervals in the set of a quantify increases intervals in the set of a quantify increases intervals increases in quantify increases intervals in the set of a quantify increases intervals in the set of a quantify increases intervals in the set of a quantify increases in the set of a quantify increase in the set of a quantify increases in the set of a quantify increase in the set of a quantify increases in the set of a quantify increase in the se			2												
b. Becognize structions in which one quantity change at a maximum signal that first differences are 2 a a b b b b b b b b b b b b b b b b b															
ucconstruction rate per unit introval relative to another.       WALT prove that a function is exponential hyshowing that the function grows       2       1       1       1       1                Recontrice stitutions which a quantity reconse decample, a description of a calinombin, calinometry and exponential matcines, including arithmetic sequences, given a graph, a description of a calinombin, calinometry and calinombin, calinometry and calinombin of a metry model of a calinombin, calinombin provide sequences given a graph, a description of a calinombin, calinombin provide sequences given a graph, a description of a calinombin, calinombin provide sequences given a graph, a description of a calinombin, calinombin provide sequences given a graph, a description of a calinombin, calinombin provide sequences given a graph, a description of a calinombin, calinombin provide sequences and calinombin provide that a quantity increasing and table to observe that a quantity that increases exponential models, calinombin, for the matchine in the sequence of the sequences of	b. Recognize situations in which one quantity changes at a										1				
Construction and exponential functions, including a struthmetic and exponential functions, including a struthmetic sequences given a graph, a description of a ALL instruction of a least function in a struthmetic and exponential functions, including a struthmetic sequences given a graph, a description of a ALL instruction of a least function in a struthmetic and exponential functions, including a struthmetic sequences given a struthmetic and exponential functions.       VALT uses a graph and table to observe that a quantity that increases a struthmetic and exponential functions.       VALT uses a graph and table to observe that a quantity that increases a struthmetic and exponential and the struction of a struthmetic sequences given a struthmetic and exponential and the struthmetic sequences given a struthmetic and exponential and the struthmetic sequences given a struthmetic and exponential and exponential and the struthmetic sequences given a struthmetic and exponential and exponential and exponential and the struthmetic sequences, given a struthmetic and exponential and exponential functions.       Image: Struthmetic sequences function in the struction of a struthmetic sequences given a struthmetic and exponential and exponential functions.       Image: Struthmetic sequences function in the struthmetic sequences given a struthmetic and exponential and exponential functions.       Imag					1						1				
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Construct linear and exponential functions, including arithmetic and generative sequences given a graph, a description of a relationship, 2       Image: Construct linear functions given a graph, a description of a relationship, 2       Image: Construct linear functions given a graph, a description of a relationship, 2       Image: Construct linear functions given a graph, a description of a relationship, 2       Image: Construct linear functions given a graph, a description of a relationship, 2       Image: Construct linear functions, including a graph and a table to observe that a quantify that increases       2       Image: Construct linear functions, including a graph and a table to observe that a quantify that increases       2       Image: Construct linear functions, including a graph and a table to observe that a quantify that increases       2       Image: Construct linear functions, including a graph and a table to observe that a quantify that increases exponential functions, including exponential functions, including graph and table to observe that a quantify that increases quadratically       3       Image: Construct linear functions, including graph and a table to observe that a quantify that increases quadratically       3       Image: Construct linear functions, including graph and table to observe that a quantify that increases quadratically       3       Image: Construct linear functions, including graph and table to a graph	F.LE.A.2	WALT construct arithmetic sequences given a graph, a description of a	2												
description of a relationship, or two imput output pairs       VAL1 construct functions given a graph, a description of a relationship, 2       2       1       1       1       1         Related relationship, or two imput output pairs       WAL1 interpret the parameters (loop and construct term) of a linear function in 2       2       1	Construct linear and exponential functions, including		2												
ubcluption of a feature reading there from a table).       WALT interpret the parameters (slope and constant term) of a linear function in 2       Image: Constant term of the parameters (slope and constant term) of a linear function in 2       Image: Constant term of the parameters (slope and constant term) of a linear function in 2         Deerve using graphs and tables that a quantify interessing term of the parameters (slope and constant term) of a linear function in 2       Image: Constant term of the parameters (slope and constant term) of a linear function in 2       Image: Constant term of the parameters (slope and constant term) of a linear function in 2         Deerve using graphs and tables that a quantify that increases exponential occles, a quantify that increases exponential occles, a quantify that increases exponential occles, a quantify that increases quadratically a       Image: Constant term of the parameters (slope and constant term) of a linear function in 2       Image: Constant term of the parameters (slope and constant term) of a linear function in 2       Image: Constant term of the parameters (slope and constant term) of a linear function in 2         ELE A functional function in a function in a constant term of the parameters (softe a linear exponential of the parameters (softe a linear exponential of the parameters (softe a linear exponential of the parameters (vertical intervential term of the term of the parameters (vertical intervential functions, including geometric sequences, given 2       Image: Constant term of the parameters (vertical intervential function term of the and term of the angle stort term of the angle stort term of the parameters (vertical intervential function term of the angle stort term of the angle stort term of the parameters (vertical intervential functions) of term of the		WALT construct linear functions given a graph, a description of a relationship,	2												
ELE A.3       WALT use a graph and a table to observe that a quantity that increases       2         Observe using graphs and tables that a quantity increasing texponentially exected a quantity increasing increasing increasing increasing increasing increasing and tables to observe that a quantity that increases exponential vectorially exected a quantity increasing increasin		· · · · · · · · · · · · · · · · · · ·			1										
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exponentially excerds a quantity increasing intervelop a quantity increasing intervelop a quantity increasing quantity that increases quadratically       3       3       1 <td< td=""><td>F.LE.A.3</td><td>WALT use a graph and a table to observe that a quantity that increases</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	F.LE.A.3	WALT use a graph and a table to observe that a quantity that increases	2												
intersty, quadratically, or more generally) as a polynomial       exponential vectorized quadratically or more generally) as a polynomial       exponential vectorized quadratically or more generally as a polynomial       independential vectorized quadratically or more generally as a polynomial         Inderstand the inverse relationship between exponents and the base bits 2, 10, or evaluate the logarithm using technology, exponential functions, including geometric sequences, given technology.       independential functions, including geometric sequences, given technology of exponential in terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions, including geometric sequences, given terms of a context.       independential functions.       indepndential		WALT use graphs and tables to observe that a quantity that increases													
FLE A.4       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Construct on the Construct on the Algebra 1 Instructional Unit.       Image: Construct on the Conster on the Construct on the Constere on the Conster on		exponentially eventually exceeds a quantity that increases quadratically	3												
Understand the inverse relationship between exponential and dare numbers and the base b is 2, 10, or e: evaluate the logarithm using technology. NOTE: Not addressed in the Algebra 1 Instructional Unit. I															
Interpret the parameters in a linear or exponential function in terms of a context.       Interpret the parameters (vertical intercept and base) of exponential       2       1	Jnderstand the inverse relationship between exponents and ogarithms. For exponential models, express as a logarithm the solution to abct = d where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
Interpret the parameters in a linear or exponential function in terms of a context.       Interpret the parameters (vertical intercept and base) of exponential       Image: Context of the parameters in a linear or exponential function         WALT interpret the parameters (vertical intercept and base) of exponential       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in the Algebra functional Unit.       Image: Context of the parameters in the Algebra functional Unit.       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in a linear or exponential function       Image: Context of the parameters in the Algebra functional Unit.       Image: Context of the parameters in the Algebra function of Unit.       Image: Context of the parameters in the Algebra function of Unit.       Image: Context of the parameters in the Algebra	FLEB5	WALT construct exponential functions, including geometric sequences, given	2		1	1	1								
Internst of a context.       TRIGONOMETRIC FUNCTIONS         F.TF.A.1       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Context	nterpret the parameters in a linear or exponential function				-										
F.TF.A.1       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions of all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions of all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions of all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of Constructions of train the Algebra 1 Instruction of Unit.       Image: Construction of Constructions of Const	in terms of a context.	WALT interpret the parameters (vertical intercept and base) of exponential	-												
Understand radian measure of an angle as the length of the arge.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Control of Control		TRIGONOMETRIC FUNC	FIONS		1	1	i	Ì	1	i	1	1	Í		
are on the unit circle subtended by the angle.       Image: Constraint of the co															
F.TF.A.2       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Constructional Unit.       Image: Constructional Unit.         F.TF.A.3       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Constructional Unit.       Image: Constructional Unit.       Image: Constructional Unit.		NOTE: Not addressed in the Algebra 1 Instructional Unit.													
Explain how the unit circle in the coordinate plane enables he extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions to all real numbers of angles traversed as radian measures of angles traversed       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of traversed as radian measures of angles traversed as radian measures of angl	arc on the unit circle subtended by the angle.														
Explain how the unit circle in the coordinate plane enables he extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of trigonometric functions to all real numbers of angles traversed as radian measures of angles traversed       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Construction of traversed as radian measures of angles traversed as radian measures of angl					1		1			1	1		1		
the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Counterclockwise around the unit circle.         F.TF.A.3       NOTE: Not addressed in the Algebra 1 Instructional Unit.       Image: Counterclockwise around the unit circle.       Image: Counterclockwise around the unit circle.															
interpreted as radian measures of angles traversed counterclockwise around the unit circle.     Image: Counterclockwise around the unit circle.       F.TF.A.3     NOTE: Not addressed in the Algebra 1 Instructional Unit.     Image: Counterclockwise around the unit circle.		NOTE: Not addressed in the Algebra 1 Instructional Unit.													
F.TF.A.3     NOTE: Not addressed in the Algebra 1 Instructional Unit.     Image: Constructional Unit.	interpreted as radian measures of angles traversed														
	counterclockwise around the unit circle.														
F.TF.A.4     NOTE: Not addressed in the Algebra 1 Instructional Unit.	F.TF.A.3	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	F TF A 4	NOTE: Not addressed in the Algebra 1 Instructional Unit				1				1	1				
	1,11,11,11,1	The first wave coses in the figgeory i monitorial offic			1	1	I	1	1	1	1	I	I		
ETEB.5	F.TF.B.5														
Choose trigonometric functions to model periodic NOTE: Not addressed in the Algebra Unstructional Unit	Choose trigonometric functions to model periodic	NOTE: Not addressed in the Algebra 1 Instructional Unit													
phenomena with specified amplitude, frequency, and midline.															

	Year at a Glance: Math - Algebra 1 Student Lear	ning ()	bjectiv	ves Clu	istered	l by Ui	nit							
OOCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.			Unit 1									Un	nit 4
							Un	it 2			Unit 3		Other N	
Key	Focus - Explicit Instruction and Assessment		Mode	ling with I uations a	Linear	Linear a	nd Expoi	nential Mo	odeling:	0.00	Iratic Mod	oling	Graphs	and One
Rty	Revisited and Reinforced			nequalitie		Function	ns and Bi	variate St	atistics	Quad		eiing	Vari	able
	Not Addressed in the Unit												Statis	51105
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
F.TF.B.6 +) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.	NOTE: Not identified in the Instructional Units.													
F.TF.B.7 (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.★	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
F.TF.C.8 Prove the Pythagorean identity sin2 ( $\theta$ ) + cos2 ( $\theta$ ) = 1 and use it to find sin( $\theta$ ), cos( $\theta$ ), or tan( $\theta$ ) given sin( $\theta$ ), cos( $\theta$ ), or tan( $\theta$ ) and the quadrant of the angle.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
F.TF.C.9 (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	INTERPRETING CATEGORICAL and O	TANTI	ATIVE	ДАТА										
S.ID.A.1	WALT represent data using dot plots on the real number line and choose an	4												
Represent data with plots on the real number line (dot plots,	WALT represent data using det plots of the teal number line and choose an	4												
histograms, and box plots).				l 1	I			I	I	I		I	I	
S.ID.A.2	WALT compare the center (mean, median) and spread (interquartile range,	4												
Interpret differences in shape, center, and spread in the	WALT interpret differences in shape, center, and spread in the context of data	4												
context of the data sets, accounting for possible effects of	WALT interpret the effect of outliers on the shape, center, and spread of a data	4												
S.ID.A.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
Summarize categorical data for two categories in two-way	WALT summarize categorical data for two categories in a two-way frequency	4												
frequency tables. Interpret relative frequencies in the	WALT interpret relative frequencies, including joint, marginal, and conditional	4												
context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible	WALT recognize possible associations and trends in categorical data	4												
				1					1		1		1	
S.ID.B.6	WALT represent data on two quantitative variables on a scatterplot	2												
Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.	WALT describe the relationship between the two sets of quantitative data	2												
a. Fit a function to the data (including with the use of	WALT fit linear and exponential functions to data by hand and with the use of	2												
echnology); use functions fitted to data to solve problems in	WALT use a function fitted to data to solve problems in the context of the data	2												
the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear and	WALT use given functions or choose a function suggested by the context.	2												
exponential models. b. Informally assess the fit of a function by plotting and analyzing residuals, including with the use of technology. c. Fit a linear function for a scatter plot that suggests a linear association.	WALT assess the fit of a function by plotting and analyzing residuals, including with the use of technology	2												

	Year at a Glance: Math - Algebra 1 Student Lear	ning O	bjectiv	es Clu	istered	l by U	nit							
OCUMENT KEY: WALT (That) indicates a concep Key	t. WALT (To) indicates a skill. Focus - Explicit Instruction and Assessment Revisited and Reinforced Not Addressed in the Unit		Eq	Unit 1 ling with l uations a nequalitie	nd		Un Ind Expor Ins and Bi			Quad	Unit 3 ratic Mod	eling	Uni Other No Graphs a Varia Statis	nlinear nd One ble
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
S.ID.C.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	WALT interpret the slope of a linear model as a constant rate of change in WALT interpret the constant term of a linear model in context of the data	2												
S.ID.C.8	WALT compute (using technology) and interpret the correlation coefficient for	2												
S.ID.C.9	WALT distinguish between correlation and causation	2												
	MAKING INFERENCES and JUSTIFYI	NG CON	CLUSI	ONS										
S.IC.A.1 Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.IC.A.2	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.IC.B.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.IC.B.4 Use data from a sample survey to estimate a population nean or proportion; develop a margin of error through the use of simulation models for random sampling.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.IC.B.5 Use data from a randomized experiment to compare two reatments; use simulations to decide if differences between parameters are significant.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.IC.B.6 Evaluate reports based on data.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													_
	CONDITIONAL PROBABILITY and the RU	LES of I	PROBA	BILITY	7									
S.CP.A.1	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.A.2	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.A.3	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.A.4 Construct and interpret two-way frequency tables of data when two categories are associated with each object being lassified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in our school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													

	Year at a Glance: Math - Algebra 1 Student Lea	ning O	bjectiv	ves Clu	istered	l by Ui	nit							
OCUMENT KEY: WALT (That) indicates a concep Key	t. WALT (To) indicates a skill. Focus - Explicit Instruction and Assessment Revisited and Reinforced Not Addressed in the Unit		Eq	Unit 1 ling with I uations a nequalitie	nd		nd Expoi	it 2 nential Me variate Si		Quad	Unit 3 Iratic Mod	eling	Un Other No Graphs a Varia Statis	onlinear and One able
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
S.CP.A.5	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.B.6 nd the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.B.7 Apply the Addition Rule, P(A or B) = P(A) + P(B) – P(A and B), and interpret the answer in terms of the model.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.B.8 (+) Apply the general Multiplication Rule in a uniform robability model, P(A and B) = P(A)P(B A) = P(B)P(A B), and interpret the answer in terms of the model.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.CP.B.9 (+) Use permutations and combinations to compute probabilities of compound events and solve problems.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
	USING PROBABILITY to MAK	E DECISI	IONS											
S.MD.A.1 (+) Define a random variable for a quantity of interest by signing a numerical value to each event in a sample space; rraph the corresponding probability distribution using the same graphical displays as for data distributions.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.MD.A.2 (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.MD.A.3 *) Develop a probability distribution for a random variable efined for a sample space in which theoretical probabilities can be calculated; find the expected value. or example, find the theoretical probability distribution for the number of correct answers obtained by New Jersey Student earning Standards guessing on all five questions of a multiple- choice test where each question has four choices, and find the expected grade under various grading schemes.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
S.MD.A.4	NOTE: Not addressed in the Algebra 1 Instructional Unit.									1				
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Year at a Glance: Math - Algebra 1 Student Learning Objectives Clustered by Unit														
DOCUMENT KEY: WALT (That) indicates a concep	t. WALT (To) indicates a skill.				Unit 2 Linear and Exponential Modeling: Functions and Bivariate Statistics				Unit 3 Quadratic Modeling			Unit 4 Other Nonlinear Graphs and One Variable		
Key	Focus - Explicit Instruction and Assessment Revisited and Reinforced		Unit 1 Modeling with Linear Equations and Inequalities											
	Not Addressed in the Unit													Statistics
NJSLS	SLO	Units	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	4A	4B
S.MD.B.5 (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values. a. Find the expected payoff for a game of chance. For example, find the expected winnings from a state lottery ticket or a game at a fast food restaurant. b. Evaluate and compare strategies on the basis of expected values. For example, compare a high-deductible versus a low- deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
				1				-	1			1		
S.MD.B.6 (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
7.MD.B.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).	NOTE: Not addressed in the Algebra 1 Instructional Unit.													
(+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a	NOTE: Not addressed in the Algebra 1 Instructional Unit.													