

## Algebra 1 – Unit 4 – ELL Scaffold

	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 1</b> CCSS: A.APR.3 WIDA ELDS: 3 Reading Writing Speaking	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.		Retell how to identify zeros of polynomials when suitable factorizations are available and use the zeros to graph the function <i>using</i> Sentence Frame, Teacher Modeling, <i>and</i> Think Alouds.		<b>VU:</b> Polynomial, factorization, rough <hr/> <b>LFC:</b> Past tense verbs, transitional phrases, ordinal numbers <hr/> <b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
	Language Objectives	Retell how to identify zeros of polynomials and use the zeros to graph the function in L1 and/or use words, phrases, and Gestures to retell the process.	Retell how to identify zeros of polynomials and use the zeros to graph the function in L1 and/or use selected technical vocabulary in phrases and short sentences to retell the process.	Retell how to identify zeros of polynomials and use the zeros to graph the function using key vocabulary in simple sentences.	Retell how to identify zeros of polynomials and use the zeros to graph the function using key vocabulary in expanded sentences.
Learning Supports	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a> Multiple Resources <a href="#">Adapted Text</a> <a href="#">Word Bank</a> <a href="#">Gestures</a> <a href="#">Cloze Sentences</a> <a href="#">Visuals</a> <a href="#">Native language support</a>	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a> <a href="#">Sentence Frame</a> Multiple Resources <a href="#">Adapted Text</a> <a href="#">Word/Phrase Bank</a> <a href="#">Visuals</a> <a href="#">Native language support</a>	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a> <a href="#">Template</a>	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a>	<a href="#">Think Alouds</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 2</b> CCSS: N.RN.1, N.RN.2 WIDA ELDS: 3 Reading Writing Speaking	Use properties of integer exponents to explain and convert between expressions involving radicals and rational exponents, using correct notation. 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.		<u>Explain and convert</u> between expressions involving radicals and radical exponents using properties of integer exponents <i>using a Venn Diagram, Charts/Posters, and Partner work.</i>		<b>VU:</b> Integer, exponents, radicals, rational exponents, notation
					<b>LFC:</b> Comparatives, superlatives, specific to word problem (oral or written)
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Explain and convert between expressions using properties of integer exponents involving radicals and radical exponents in L1 and/or use words and phrases to complete a Venn Diagram.	Explain and convert between expressions using properties of integer exponents involving radicals and radical exponents in L1 and/or use selected technical vocabulary in phrases and short sentences to complete a Venn Diagram.	Explain and convert between expressions using properties of integer exponents involving radicals and radical exponents using key vocabulary in simple sentences.	Explain and convert between expressions using properties of integer exponents involving radicals and radical exponents using key, technical vocabulary in expanded sentences.	Explain and convert between expressions using properties of integer exponents involving radicals and radical exponents using precise vocabulary in complex sentences.
Learning Supports	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a> <a href="#">Word Bank</a> <a href="#">Pictures and Photographs</a> <a href="#">L1 text and/or support</a>	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a> <a href="#">Word/Phrase Bank</a> <a href="#">L1 text and/or support</a>	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a>	<a href="#">Venn Diagram</a> <a href="#">Partner work</a>	<a href="#">Venn Diagram</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 3</b> CCSS: N.RN.3 WIDA ELDS: 3 Reading Writing Speaking	Use the properties of rational and irrational numbers to explain why the sum or product of two rational numbers is rational; the sum of a rational number and an irrational number is irrational; and the product of a nonzero rational number and an irrational number is irrational.		<u>Describe and explain</u> the reasons why a sum or product of two rational numbers is rational; the sum of a rational and an irrational is irrational; and the product of a nonzero rational number and an irrational number is irrational <i>using</i> Note Cards, Visuals, <i>and a</i> Checklist.		<b>VU:</b> Rational, irrational, sum, nonzero
					<b>LFC:</b> Transitional phrases, ordinal numbers, present progressive tense, adverbs
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Describe and explain the reasons why a sum of two numbers is rational or irrational in L1 and/or use words, phrases, and Gestures to describe reasons.	Describe and explain the reasons why a sum of two numbers is rational or irrational in L1 and/or use selected technical vocabulary in phrases and short sentences to describe reasons.	Describe and explain the reasons why a sum of two numbers is rational or irrational using key, technical vocabulary in simple sentences.	Describe and explain the reasons why a sum of two numbers is rational or irrational using key, technical vocabulary in expanded sentences.	Describe and explain the reasons why a sum of two numbers is rational or irrational using precise vocabulary in complex sentences.
Learning Supports	<a href="#">Note Cards</a> <a href="#">Visuals</a> <a href="#">Checklist</a> <a href="#">Adapted Text</a> <a href="#">Charts/Posters</a> <a href="#">Teacher Support</a> <a href="#">Word Bank</a> <a href="#">Gestures</a>	<a href="#">Note Cards</a> <a href="#">Visuals</a> <a href="#">Checklist</a> <a href="#">Adapted Text</a> <a href="#">Charts/Posters</a> <a href="#">Teacher Support</a> <a href="#">Word/Phrase Bank</a>	<a href="#">Note Cards</a> <a href="#">Visuals</a> <a href="#">Checklist</a>	<a href="#">Note Cards</a> <a href="#">Visuals</a>	<a href="#">Note Cards</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 4</b> CCSS: F.IF.4, F.IF.5 , F.1F.7 WIDA ELDS: 3 Reading Writing Speaking	Sketch the graph of a function that models a relationship between two quantities (expressed symbolically or from a verbal description) showing key features ( including intercepts, minimums/maximums, domain, and rate of change) by hand in simple cases and using technology in more complicated cases and relate the domain of the function to its graph. ★		<u>Demonstrate comprehension</u> of a function that models a relationship between two quantities (expressed symbolically or from a verbal description) by sketching the graph of the function showing key features by hand and with technology <i>using a <a href="#">Cloze Sentences</a>, Visuals, and Partner work.</i>		<b>VU:</b> Sketch, key, features, domain, function
					<b>LFC:</b> Transitional phrases, ordinal numbers, imperatives
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Demonstrate comprehension of written problems in L1 and/or use Pictures and selected vocabulary by sketching the graph of a function that models a relationship between two quantities showing key features.	Demonstrate comprehension of written problems in L1 and/or use selected technical vocabulary in phrases and short sentences by sketching the graph of a function that models a relationship between two quantities showing key features.	Demonstrate comprehension of written problems which use key vocabulary in simple sentences by sketching the graph of a function that models a relationship between two quantities showing key features.	Demonstrate comprehension of written problems which use key, technical vocabulary in expanded sentences by sketching the graph of a function that models a relationship between two quantities showing key features.	Demonstrate comprehension of written problems which use precise vocabulary in complex sentences by sketching the graph of a function that models a relationship between two quantities showing key features.
Learning Supports	<a href="#">Visuals</a> <a href="#">Partner work</a> <a href="#">Cloze Sentences</a> <a href="#">Checklist</a> <a href="#">L1 text and/or support</a> <a href="#">Word Bank</a> Multiple Resources	<a href="#">Visuals</a> <a href="#">Partner work</a> <a href="#">Checklist</a> <a href="#">L1 text and/or support</a> <a href="#">Sentence Frame</a> <a href="#">Word/Phrase Bank</a> Multiple Resources	<a href="#">Visuals</a> <a href="#">Partner work</a> Multiple Resources	<a href="#">Visuals</a> <a href="#">Partner work</a>	<a href="#">Visuals</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 5</b> CCSS: F.IF.9 WIDA ELDS: 3 Reading Writing Speaking Listening	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in 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.		<u>Compare and contrast</u> orally and in writing properties of two functions each represented in a different way <i>using</i> Charts/Posters, <i>choral reading</i> , a Venn Diagram, and Sentence Frame.		<b>VU:</b> Algebraically, graphically, numerically, tables
					<b>LFC:</b> Comparatives, superlatives, specific to word problem (oral or written)
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Compare and contrast orally and in writing properties of two functions each represented in a different way in L1 and/or use words and phrases to complete a Venn Diagram.	Compare and contrast orally and in writing properties of two functions each represented in a different way in L1 and/or use selected technical vocabulary in phrases and short sentences to complete a Venn Diagram.	Compare and contrast orally and in writing properties of two functions each represented in a different way using key, technical vocabulary in simple sentences.	Compare and contrast properties orally and in writing of two functions each represented in a different way using key, technical vocabulary in expanded sentences.	Compare and contrast orally and in writing properties of two functions each represented in a different way using precise vocabulary in complex sentences.
Learning Supports	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a> <a href="#">Word Bank</a> <a href="#">Cloze Sentences</a> <a href="#">Pictures and Photographs</a> <a href="#">Native language explanations</a>	<a href="#">Venn Diagram</a> <a href="#">Charts/Posters</a> <a href="#">Choral Reading</a> <a href="#">Word/Phrase Bank</a> <a href="#">Sentence Frame</a> <a href="#">Peer Coach</a> <a href="#">L1 text and/or support</a>	<a href="#">Venn Diagram</a> <a href="#">Charts/Posters</a> <a href="#">Choral Reading</a>	<a href="#">Venn Diagram</a> <a href="#">Charts/Posters</a>	<a href="#">Venn Diagram</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 6</b> CCSS: F.IF.6, WIDA ELDS: 3 Reading Writing Speaking	Calculate (over a specified period if presented symbolically or as a table) or estimate (if presented graphically) and interpret the average rate of change of a function. ★		<u>Summarize</u> how to calculate (over a specified period if presented symbolically or as a table), estimate (if presented graphically), and interpret the average rate of change of a function <i>using</i> Sentence Starter, Sentence Frame, <i>and a</i> <a href="#">Cloze Sentences</a> .		<b>VU:</b> Calculate, estimate, interpret <hr/> <b>LFC:</b> Modals (would, could, might), compound tenses (would have been) <hr/> <b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
	Language Objectives	Summarize how to calculate, estimate, and interpret the average rate of change of a function in L1 and/or use words, phrases, and Gestures to summarize the process.	Summarize how to calculate, estimate, and interpret the average rate of change of a function in L1 and/or use selected technical vocabulary in phrases and short sentences.	Summarize how to calculate, estimate, and interpret the average rate of change of a function using key vocabulary in simple sentences.	Summarize how to calculate, estimate, and interpret the average rate of change of a function using key, technical vocabulary in expanded sentences.
Learning Supports	<a href="#">Peer Coach</a> <a href="#">Cloze Sentences</a> <a href="#">Word Bank</a> <a href="#">Small group</a> <a href="#">Charts/Posters</a> <a href="#">L1 text and/or support</a> <a href="#">Pictures and Photographs/illustrations</a>	<a href="#">Peer Coach</a> <a href="#">Sentence Frame</a> <a href="#">Word/Phrase Bank</a> <a href="#">Small group</a> <a href="#">Charts/Posters</a> <a href="#">L1 text and/or support</a>	<a href="#">Peer Coach</a> <a href="#">Sentence Starter</a> Multiple Resources	<a href="#">Peer Coach</a> <a href="#">Sentence Starter</a>	<a href="#">Peer Coach</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 7</b> CCSS: F.IF. 8 WIDA ELDS: 3 Reading Writing Speaking	Write functions in different but equivalent forms by manipulating quadratic expressions using methods such as factoring and completing the square.		Retell how to write functions in different but equivalent forms by manipulating quadratic expressions using factoring and completing the square <i>using</i> <a href="#">Note Cards</a> , <a href="#">Teacher Modeling</a> , and <a href="#">Think Alouds</a> .		<b>VU:</b> Equivalent, manipulate, factoring, completing the square
					<b>LFC:</b> Past tense verbs, transitional phrases, ordinal numbers
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Retell how to write functions in different but equivalent forms in L1 and/or use selected words, phrases, and <a href="#">Gestures</a> to retell the process.	Retell how to write functions in different but equivalent forms in L1 and/or use selected technical vocabulary in phrases and short sentences to retell the process.	Retell how to write functions in different but equivalent forms using key, technical vocabulary in simple sentences.	Retell how to write functions in different but equivalent forms using key, technical vocabulary in expanded sentences.	Retell how to write functions in different but equivalent forms using precise vocabulary in complex sentences.
Learning Supports	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a> <a href="#">Note Cards</a> <a href="#">Adapted Text</a> <a href="#">Word Bank</a> <a href="#">Gestures</a> <a href="#">Cloze Sentences</a> <a href="#">Visuals</a> <a href="#">Native language support</a>	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a> <a href="#">Note Cards</a> <a href="#">Adapted Text</a> <a href="#">Word/Phrase Bank</a> <a href="#">Sentence Frame</a> <a href="#">Visuals</a> <a href="#">Native language support</a>	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a> <a href="#">Note Cards</a>	<a href="#">Think Alouds</a> <a href="#">Teacher Modeling</a>	<a href="#">Think Alouds</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 8</b> CCSS: F.BF.1 WIDA ELDS: 3 Reading Writing Speaking	Write a function that describes a linear or quadratic relationship between two quantities given in context using an explicit expression, a recursive process, or steps for calculation and relate these functions to the model. ★		Describe a linear or quadratic relationship between two quantities given in context using an explicit expression, a recursive process or steps for calculation and relate the function to a model <i>using</i> Visuals, Sentence Frame, and Gestures.		<b>VU:</b> Explicit, recursive, linear, quadratic
					<b>LFC:</b> Transitional phrases, ordinal numbers, present progressive tense, adverbs
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Describe a linear or quadratic relationship between two quantities using a specific method and relating the function to a model in L1 and/or use Gestures, Pictures and selected single words to describe the process.	Describe a linear or quadratic relationship between two quantities using a specific method and relating the function to a model in L1 and/or use selected technical vocabulary in phrases and short sentences.	Describe a linear or quadratic relationship between two quantities using a specific method and relating the function to a model using key vocabulary in simple sentences.	Describe a linear or quadratic relationship between two quantities using a specific method and relating the function to a model using key, technical vocabulary in expanded sentences.	Describe a linear or quadratic relationship between two quantities using a specific method and relating the function to a model using precise vocabulary in complex sentences.
Learning Supports	<a href="#">Visuals</a> <a href="#">Cloze Sentences</a> <a href="#">Gestures</a> <a href="#">Partner work</a> <a href="#">Teacher Support</a> <a href="#">Word/Phrase Bank</a> <a href="#">Checklist</a> <a href="#">Native language support</a>	<a href="#">Visuals</a> <a href="#">Sentence Frame</a> <a href="#">Partner work</a> <a href="#">Teacher Support</a> <a href="#">Word/Phrase Bank</a> <a href="#">Checklist</a> <a href="#">Native language support</a>	<a href="#">Visuals</a> <a href="#">Sentence Frame</a> <a href="#">Partner work</a> <a href="#">Teacher Support</a>	<a href="#">Visuals</a> <a href="#">Teacher Support</a>	<a href="#">Visuals</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 9</b> CCSS: F.BF.3 WIDA ELDS: 3 Reading Writing Speaking	Identify the effects of translations [ $f(x) + k$ , $k f(x)$ , $f(kx)$ , and $f(x + k)$ ] on a function, find the value of $k$ given the graphs.		<u>Demonstrate comprehension of</u> the steps needed to identify the effects of translations [ $f(x) = k$ , $kf(x)$ , $f(kx)$ and $f(x + K)$ ] on a function and to find the value of a $k$ given the graphs <i>using Partner work, multiple resources, and a Checklist.</i>		<b>VU:</b> Translations, identify, value <hr/> <b>LFC:</b> Transitional phrases, ordinal numbers, imperatives <hr/> <b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
	Language Objectives	Demonstrate comprehension of the steps needed to identify the effects of translations on a function and to find a certain value of a given graph in L1 and/or use words, phrases, and Pictures to sequence steps.	Demonstrate comprehension of the steps needed to identify the effects of translations on a function and to find a certain value of a given graph in L1 and/or use selected technical vocabulary in phrases and short sentences.	Demonstrate comprehension of the steps needed to identify the effects of translations on a function and to find a certain value of a given graph using key, technical vocabulary in simple sentences.	Demonstrate comprehension of the steps needed to identify the effects of translations on a function and to find a certain value of a given graph using key, technical vocabulary in expanded sentences.
Learning Supports	<a href="#">Partner work</a> <a href="#">Visuals</a> <a href="#">Checklist</a> <a href="#">Adapted Text</a> <a href="#">Cloze Sentences</a> <a href="#">Word Bank</a> Multiple Resources <a href="#">L1 text and/or support</a>	<a href="#">Partner work</a> <a href="#">Visuals</a> <a href="#">Checklist</a> <a href="#">Adapted Text</a> <a href="#">Sentence Frame</a> <a href="#">Word/Phrase Bank</a> Multiple Resources <a href="#">L1 text and/or support</a>	<a href="#">Partner work</a> <a href="#">Visuals</a> Multiple Resources	<a href="#">Partner work</a> <a href="#">Visuals</a>	<a href="#">Partner work</a>

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	Student Learning Objective (SLO)		Language Objective		Language Needed
<b>SLO: 10</b> CCSS: F.LE.3 , F.LE.5 WIDA ELDS: 3 Reading Speaking Writing	Compare (using graphs and tables) linear, quadratic, and exponential models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function, include interpretation of parameters in terms of a context.		<u>Compare and contrast</u> linear, quadratic and exponential models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or as a polynomial function, include interpretation of parameters in terms of context <i>using a Venn Diagram, Partner work, and Native language</i> explanations.		<b>VU:</b> Linear, quadratic, exponential, parameters
					<b>LFC:</b> Comparatives, superlatives, specific to word problem (oral or written)
					<b>LC:</b> Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Compare and contrast various models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing as a polynomial function in L1 and/or use selected words and phrases to complete a Venn Diagram.	Compare and contrast various models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing as a polynomial function in L1 and/or use selected technical vocabulary in phrases and short sentences.	Compare and contrast various models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing as a polynomial function using key vocabulary in simple sentences.	Compare and contrast various models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing as a polynomial function using key, technical vocabulary in expanded sentences.	Compare and contrast various models to determine that a quantity increasing exponentially eventually exceeds a quantity increasing as a polynomial function using precise vocabulary in complex sentences.
Learning Supports	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a> <a href="#">Word Bank</a> <a href="#">Pictures and Photographs</a> <a href="#">L1 text and/or support</a>	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a> <a href="#">Word/Phrase Bank</a> <a href="#">Peer Coach</a> <a href="#">L1 text and/or support</a>	<a href="#">Venn Diagram</a> <a href="#">Partner work</a> <a href="#">Charts/Posters</a>	<a href="#">Venn Diagram</a> <a href="#">Partner work</a>	<a href="#">Venn Diagram</a>