



Unit Title:	Linear Relationship
Unit Vocabulary:	Linear Equation, variable, like terms, distribute, combine,
Upcoming Common Assessments (MasteryConnect):	Minor Quiz Oct 22 Major October 24

	Standard(s) + Learning Objective	Activating Experience (Opening, may include "Scholar Starter")	Learning Experience (Work Time: SB Materials and Resources, Vocab, Scaffolds/Supports, SWRL, Costas)	Formative or Summative Assessment(s)	Summarizing Experience (Closing)	WICOR, AVID and/or ELlevation Strategies (aligned with learning objective)	
MONDAY	Standard (write out): 8.PAFR.2.1: Solve multi-step one-variable equations and inequalities with variables on both sides with rational coefficients. Learning Objective Skill (what), Content (why), Product (how): Scholars will be able to solve multi-step inequalities with	Scholar Starter <u>Cycle 4 Day 5</u> Activating Strategy Review over inequalities symbols, multiplication /division rule with negatives,	EEssential Question <i>What strategies help us balance equations and isolate variables when terms appear on both sides?</i> Standards Based Materials & Resources: Direct Instruction Solving a multi-step equation involving distributive property and grouping like terms. Independent practice Solve a multi-step equations <u>Additional Practice</u> Content/Academic Vocabulary:	Exit Ticket # Name: _____ Date: _____ 1. Solve the following inequalities and graph the solution on a number line: a) $3a + 5 > 2a - 4$ b) $5a - 7 \leq 2a + 8$ 2. Determine if the following inequality is true for $a = 3$: $4a + 1 < (2a + 10)$	How do you feel about lesson How confident are you for your quiz tomorrow	WICOR W- Write- Each scholar will write responses to prompt from activating strategy C- Collaboration Students work in groups to answer question from	

	variables on each side by grouping like terms.	how to graph on a number line	Distributive Property, Like Terms, Solution, Isolate, Manipulate, Confirm, Diverse <u>ILAP/IEP/504 Scaffolds & Supports:</u> Sentence Frames: Word Bank or Wall: Provide academic vocabulary with definitions and visuals. Group work: Scholars work in groups to complete tasks. Chunking Tasks: Break multi-step similarity justifications into small, manageable steps. Allow Multiple Modalities for Response: Written, oral, diagram-based Additional guided practice with teacher check-ins <u>Opportunities to SWRL:</u> Speak- Scholars speak by answering prompts from the activating strategy. Write- Scholars write response to the prompt from			activating strategy and activities that follows O- Organize Scholars organize thoughts in activating strategy R-Read Read the content in the text and prompt from the entire lesson and previous note	
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			<u>Costa's Levels of Thinking/Questioning:</u> Questions are clearly stated in activating strategy and problems from text-McGraw-Hill Level 1: What are the basic steps for solving a multi-step equation?? Level 2: How can you check if your solution to an equation is correct? Level 3: How can solving equations with variables on both sides help you understand real-world relationships				
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T U E S D A Y	Standard (write out): 8.PAFR.2.2: Describe single-variable equations as having one solution, no solution, or an infinite number of solutions. <u>Learning Objective</u> Skill (what), Content (why), Product (how): Scholars will Scholars will be able to determine the number of solutions to linear equations by analyzing and comparing coefficients and constants on both sides of the equation.	Scholar Starter <u>Cycle 4 Day 5</u> Activating Strategy Activity based exploration Pg.312 teacher version of SC Reveal Textbook Pair scholars together to answer the question: If $3x + 1 = 2x + 5$, how can you find the value of x?	Essential Question How can we determine whether a linear equation has one solution, no solution, or infinitely many solutions? <u>Standards Based Materials & Resources:</u> Student notebooks, Guided notes on types of solutions to linear equations, Practice worksheet on one, none, and infinite solutions, Example problem cards for group or partner work. Anchor chart: <i>"How to Identify the Number of Solutions in Linear Equations"</i> Exit ticket slips for quick assessment Guided Learning Review Prior Knowledge: Work through several examples together. Call on scholars to explain each step and reasoning. Encourage the use of mathematical vocabulary such as <i>coefficients</i>, <i>constants</i>, and <i>equivalent</i>	Exit Ticket Explain in one sentence why each equation has one solution, no solution, or infinitely many solutions.	Review the three types of solutions for linear equations: one solution, no solution, and infinitely many solutions. Ask scholars to share examples they solved during the lesson.	WICOR W- Write- Each scholar will write responses to prompt from activating strategy Focus notes and summary C- Collaboration Students work in groups to answer question from activating strategy and summary O- Organize Scholars organize thoughts on Cornell notes R-Read Read the content in the text and prompt from	
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		<i>expressions.</i> Introduce Concept: Model examples of linear equations on the board that have: • One solution (e.g., $2x + 3 = 9$) • No solution (e.g., $3x + 2 = 3x + 5$) • Infinitely many solutions (e.g., $4x + 6 = 4x + 6$) <u>Content/Academic Vocabulary:</u> Linear Equation – an equation whose graph forms a straight line. Variable – a symbol (usually a letter) that represents an unknown number. Coefficient – the numerical factor multiplied by a variable. Constant – a fixed value that does not change. Solution – a value that makes an equation true. One Solution – when the equation is true for only one value of the variable. No Solution – when there is no value that makes the equation true. Infinitely Many Solutions – when all values of the variable make the equation true. Equivalent Equations – two equations that have the same solution(s). Simplify – to combine like terms or perform operations to make an			the entire lesson and previous notes	
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			equation easier to work with. <u>ILAP/IEP/504 Scaffolds & Supports:</u> Visual Supports: Use charts or diagrams to show examples of one solution, no solution, and infinitely many solutions. Step-by-Step Instructions: Provide a guided checklist for solving linear equations and determining the number of solutions. Sentence Starters: Offer phrases like <i>"This equation has _____ solution because _____"</i> to support verbal or written explanations. <u>Opportunities to SWRL:</u> Speak: Write: Read: Listen: <u>Costa's Levels of Thinking/Questioning:</u> Level 1: What is the solution to this equation?				
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			Level 2: How do you know if an equation has no solution? Level 3: How can understanding the number of solutions help in real-life problem-solving situations?				
W E D N E S D A Y	Standard (write out): 8.PAFR.2.2: Describe single-variable equations as having one solution, no solution, or an infinite number of solutions. Learning Objective Skill (what), Content (why), Product (how): Scholars will be able to explain their reasoning using precise mathematical language, tools, and models to determine whether a linear equation has one solution, no solution, or infinitely many	Scholar Starter <u>Cycle 4 Day 5</u> Activating Strategy Display three different linear equations on the board: $2x + 3 = 9$ $4x + 5 = 4x + 7$ Ask scholars to work individually for 2–3 minutes to: Solve each	Essential Question How can using precise mathematical language and models help us communicate and justify the number of solutions in a linear equation? Standards Based Materials & Resources: Student notebooks, Guided notes on types of solutions to linear equations, Practice worksheet on one, none, and infinite solutions, Example problem cards for group or partner work. Anchor chart: <i>“How to Identify the Number of Solutions in Linear Equations”</i> Exit ticket slips for quick assessment Content/Academic Vocabulary: Linear Equation – an equation whose graph forms a straight line.	Exit Ticket Write your own linear equation that has no solution.	Revisit the essential question: <i>“How can we determine whether a linear equation has one solution, no solution, or infinitely many solutions?”</i> Encourage students to answer using examples from today’s lesson.	WICOR W- Write- Each scholar will write responses to prompt from activating strategy Focus notes and summary C- Collaboration Students work in groups to answer question from activating strategy and summary O- Organize Scholars organize	

	solutions. equation. Identify the type of solution: one solution, no solution, or infinitely many solutions. Afterward, have scholars turn and talk with a partner to explain how they determined the solution type using mathematical language. Quick share-out: Call on 2–3 scholars to explain their reasoning to the class.	Variable – a symbol (usually a letter) that represents an unknown number. Coefficient – the numerical factor multiplied by a variable. Constant – a fixed value that does not change. Solution – a value that makes an equation true. One Solution – when the equation is true for only one value of the variable. No Solution – when there is no value that makes the equation true. Infinitely Many Solutions – when all values of the variable make the equation true. <u>ILAP/IEP/504 Scaffolds & Supports:</u> Step by step scaffold how to find a solution from an equation. Visual Supports: Use charts or diagrams to show examples of one solution, no solution, and infinitely many solutions. Sentence Starters: Offer phrases like “<i>This equation has _____ solution because _____</i>” to support verbal or written explanations.			thoughts on Cornell notes R-Read Read the content in the text and prompt from the entire lesson and previous notes	
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			<u>Opportunities to SWRL:</u> S- Scholars speak in gallery walk activity answering prompts and also while doing group work. W- Scholars write responses on justification sheet in gallery walk and also in text Mc Graw Hill R- Scholars read prompts in gallery walk as well as their text book. L- Scholars listen to each other response to the prompt as well as to direct instruction <u>Costa's Levels of Thinking/Questioning:</u> Level 1: What are the basic steps for solving a multi-step equation?? Level 2: How can you check if your solution to an equation is correct? Level 3: How can solving equations with variables on both sides help you understand real-world relationships				
T H U R S D	Standard (write out): 8.PAFR.2.2: Describe single-variable equations as having one solution, no solution, or an	Scholar Starter <u>Cycle 4 Day 5</u>	<i>Essential Question</i> <i>How can I use mathematical language, tools, and models to determine and explain the number of solutions in a linear equation?</i>	Exit Ticket <u>#1-2 Solving Inequalities with Variables</u>	How do you feel about lesson How confident are you for your quiz tomorrow	WICOR W- Write- Each scholar will write	

A Y	infinite number of solutions. <u>Learning Objective</u> Skill (what), Content (why), Product (how): I can explain my reasoning using precise mathematical language, tools, and models to determine whether a linear equation has one solution, no solution, or infinitely many solutions.	Activating Strategy	<u>Standards Based Materials & Resources:</u> Anchor charts highlighting key vocabulary and strategies Practice worksheets for independent or group work Exit ticket templates for quick assessment Short instructional tutorials on determining the number of solutions Independent practice Solve a multi-step equations <u>Content/Academic Vocabulary:</u> Linear Equation – an equation whose graph forms a straight line. Variable – a symbol (usually a letter) that represents an unknown number. Coefficient – the numerical factor multiplied by a variable. Constant – a fixed value that does not change.	<u>on Both Sides</u>		responses to prompt from activating strategy C- Collaboration Students work in groups to answer question from activating strategy and activities that follows O- Organize Scholars organize thoughts in activating strategy R-Read Read the content in the text and prompt from the entire lesson and previous notes	
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			Solution – a value that makes an equation true. One Solution – when the equation is true for only one value of the variable. No Solution – when there is no value that makes the equation true. Infinitely Many Solutions – when all values of the variable make the equation true. Equivalent Equations – two equations that have the same solution(s). Simplify – to combine like terms or perform operations to make a <u>ILAP/IEP/504 Scaffolds & Supports:</u> Sentence Frames: Word Bank or Wall: Provide academic vocabulary with definitions and visuals. Group work: Scholars work in groups to complete tasks. Chunking Tasks: Break multi-step similarity justifications into small,				
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			manageable steps. Allow Multiple Modalities for Response: Written, oral, diagram-based Additional guided practice with teacher check-ins <u>Opportunities to SWRL:</u> Speak- Scholars speak by answering prompts from the activating strategy. Write- Scholars write response to the prompt from <u>Costa's Levels of Thinking/Questioning:</u> Questions are clearly stated in activating strategy and problems from text-McGraw-Hill Level 1: Level 2: Level 3:				
F R I D A	Standard (write out): 8.PAFR.2.1: Solve multi-step one-variable equations and inequalities with variables on	Activating Strategy Scholars work on multi-step equations	Lesson Quiz <i>Essential Question</i>	Exit Ticket Which strategies or			

Y	both sides with rational coefficients. Learning Objective Skill (what), Content (why), Product (how): Scholars can accurately determine the number of solutions for linear equations and explain my reasoning using precise mathematical language, tools, and models, aiming to achieve at least 80% accuracy on the Major quiz.	independently on Minor quiz .	<u>Standards Based Materials & Resources:</u> <u>Content/Academic Vocabulary:</u> <u>ILAP/IEP/504 Scaffolds & Supports:</u> <u>Opportunities to SWRL:</u> <u>Costa's Levels of Thinking/Questioning:</u> Level 1: What are the basic steps for solving a multi-step equation?? Level 2: How can you check if your solution to an equation is correct? Level 3: How can solving equations with variables on both sides help you understand real-world relationships	tools helped you most in determining the number of solutions for linear equations, and how can you use them to improve your accuracy in future problems?			
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