

**THIRD TERM
WEEKLY LESSON NOTES
WEEK 5**

Week Ending: 28-07-2023	DAY:	Subject: Mathematics
Duration: 60MINS		Strand: Number
Class: B8	Class Size:	Sub Strand: Linear Inequalities
Content Standard: B8.2.3.1 Demonstrate an understanding of linear inequalities of the form $x + a \geq b$		Indicator: B8.2.3.1.1 Translate word problems into linear inequalities in one variable and vice versa
		Lesson: 1 of 2
Performance Indicator: Learners can translate word problems into linear inequalities in one variable		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 120		
Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	<p>Revise with learners on the previous lesson.</p> <p>Discuss the importance of understanding and solving inequalities in various real-life scenarios.</p> <p>Share performance indicators with learners and introduce the lesson.</p>	
PHASE 2: NEW LEARNING	<p>Review the concept of linear equations and inequalities from previous lessons.</p> <p>Introduce the concept of linear inequalities and their representation on a number line.</p> <p>Remind learners of the symbols used in linear inequalities, such as $<$ (less than), $>$ (greater than), \leq (less than or equal to), and \geq (greater than or equal to).</p> <p>Provide a few word problems to the class and discuss strategies for translating them into linear inequalities.</p> <p>Model the process of identifying key information, variables, and the inequality symbol in each word problem.</p> <p><i>Example 1;</i> A store sells T-shirts for ₦10 each. Write a linear inequality to represent the number of T-shirts you can buy with ₦50 or less.</p> <p><i>Solution:</i> Let's represent the number of T-shirts as 'x'. The cost of each T-shirt is ₦10. The total amount spent on T-shirts can be calculated by multiplying the number of T-shirts (x) by the cost of each T-shirt (₦10). <i>Linear Inequality:</i> $10x \leq 50$</p>	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	<p><i>Example 2: Translating Linear Inequality into Word Problem</i> <i>Linear Inequality: $3y > 15$</i></p> <p><i>Solution:</i> <i>Let's represent the unknown quantity as 'y'.</i> <i>The inequality states that three times the value of 'y' is greater than 15.</i></p> <p><i>Word Problem: Three times a number is greater than 15.</i></p> <p>Write the corresponding linear inequality on the board and explain how it represents the given situation.</p> <p>Have the learners practice translating word problems into linear inequalities individually or in pairs.</p> <p>Present learners with linear inequalities in one variable and ask them to convert them into word problems.</p> <p>Discuss the steps involved in this process, such as identifying the variable, determining the inequality symbol, and writing a description of the situation based on the inequality.</p> <p>Allow learners to work individually or in pairs to practice translating linear inequalities into word problems using worksheets or handouts.</p> <p>Discuss the concepts of shading, open and closed circles, and graphing linear inequalities on a number line or coordinate plane.</p> <p>Provide a few examples and demonstrate how to solve and graph linear inequalities.</p> <p><u>Assessment</u></p> <ol style="list-style-type: none"> Convert the linear inequality $3x + 5 < 10$ into a word problem. Solve the linear inequality $2y - 3 \geq 7$ and write the solution set. Translate the following word problem into a linear inequality: "The temperature is at least 20 degrees Celsius." Translate the word problem "You must be at least 13 years old to ride the roller coaster" into a linear inequality. Convert the linear inequality $-4z + 6 > 10$ into a word problem. Solve the linear inequality $5x - 2 \leq 18$ and write the solution set. 	
<p>PHASE 3: REFLECTION</p>	<p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>	

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Duration: 60MINS		Strand: Number
Class: B8	Class Size:	Sub Strand: Linear Inequalities
Content Standard: B8.2.3.1 Demonstrate an understanding of linear inequalities of the form $x + a \geq b$	Indicator: B8.2.3.1.2 Solve simple linear inequalities	Lesson: 1 of 2
Performance Indicator: Learners can solve simple linear inequalities		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 121		

Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	<p>Revise with learners on the previous lesson.</p> <p>Share performance indicators with learners and introduce the lesson.</p>	
PHASE 2: NEW LEARNING	<p>Recap the concept of linear inequalities and their symbols ($<$, $>$, \leq, \geq).</p> <p>Discuss the difference between solving an equation and solving an inequality.</p> <p>Remind learners of the importance of representing solutions on a number line.</p> <p>Start with an example of a simple linear inequality, such as $2x + 3 > 7$.</p> <p>Explain the steps to solve the inequality:</p> <ol style="list-style-type: none"> Treat the inequality sign as an equal sign and solve the equation. Represent the solution on a number line using an open circle for $<$ or $>$ and a closed circle for \leq or \geq. Shade the region to the left (for $<$ or \leq) or to the right (for $>$ or \geq) of the solution point on the number line. <p>Solve a few more examples together as a class, guiding learners through the steps.</p> <p><i>Example 1: Solve the linear inequality: $3x + 5 > 10$</i></p> <p><i>Solution:</i> <i>Subtract 5 from both sides of the inequality:</i> $3x > 10 - 5$ $3x > 5$</p> <p><i>Divide both sides by 3 (remember to flip the inequality symbol when dividing by a negative number):</i> $x > 5/3$</p>	<p>Counters, bundle and loose straws base ten cut square, Bundle of sticks</p>

	<p>The solution to the inequality is $x > 5/3$.</p> <p>Example 2: Solve the linear inequality: $2y - 3 \leq 7$</p> <p>Solution: Add 3 to both sides of the inequality: $2y \leq 7 + 3$ $2y \leq 10$</p> <p>Divide both sides by 2: $y \leq 10/2$ $y \leq 5$</p> <p>The solution to the inequality is $y \leq 5$.</p> <p>Example 3: Solve the linear inequality: $-4z + 6 \geq 10$</p> <p>Solution: Subtract 6 from both sides of the inequality: $-4z \geq 10 - 6$ $-4z \geq 4$</p> <p>Divide both sides by -4 (remember to flip the inequality symbol when dividing by a negative number): $z \leq 4/(-4)$ $z \leq -1$</p> <p>The solution to the inequality is $z \leq -1$.</p> <p>Provide worksheets with linear inequalities for learners to solve individually or in pairs.</p> <p>Demonstrate the process by using an example and discuss the difference between an open circle and a closed circle.</p> <p>Allow learners to practice graphing the solutions of linear inequalities on graph paper or using graphing software if available.</p> <p><u>Assessment</u></p> <ol style="list-style-type: none"> Solve the linear inequality: $2x - 4 < 10$. Find the solution set for the linear inequality: $3y + 7 \geq 22$. Solve the linear inequality: $-5z + 2 > -8$. Determine the solution to the linear inequality: $4x + 3 \leq 15$. Find the solution set for the linear inequality: $2m - 5 \geq 7$. Solve the linear inequality: $3y + 2 < -4$. Determine the solution to the linear inequality: $-2z + 6 > 10$. Find the solution set for the linear inequality: $5x - 3 \leq 12$. Solve the linear inequality: $2m + 5 \geq 17$. Determine the solution to the linear inequality: $-3y - 2 > -8$. 	
<p>PHASE 3: REFLECTION</p>	<p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>	