	TATAG	School Logo	
OBLIKA NG PILIF	Batang Makabansa BAGONG PILIPINAS		
Name of		Quarter:	4 th
School:			Quarter
Grade Level & Section:	Grade 7	Week:	Week 5 D1
Subject:	MATHEMATICS	Date and Time:	
Topic:		Teacher:	

I. CONTENT,	STANDARDS AND LEARNING COMPETENCIES	ANNOTATIONS
A. CONTENT STANDARDS	The learner should understand the rearrangement of a formula to make a different variable the subject of the formula.	
B. PERFORMANCE STANDARDS	By the end of the lesson, the learners are able to rearrange a formula to make a different variable the subject of the formula. (NA)	
C. LEARNING COMPETENCIE S AND OBJECTIVES	Learning Competency By the end of the lesson, the learners are able to: LC 6. Solve one variable in terms of the other variables in a formula. 1. Define a literal equation.	
	II. CONTENT	
	Solving Literal Equations	
A. REFERENCES	III. LEARNING RESOURCES Amusing Algebra. (2024). Solving literal equations clue https://www.teacherspayteachers.com/Product/Solving Equations-Clue-Mystery-Activity-6109358?st=e2ed7be 22 Cachet. (2014, July 25). Rate-Time-Distance problems	g-Literal- ee0bf6ad1824978c9f5fd018
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river/math/equat inequ/Practice Solving Literal Equations.pdf

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B. OTHER **LEARNING** RESOURCES

IV. TEACHING AND LEARNING PROCEDURE

BEFORE/PRE-LESSON PROPER

ACTIVATING PRIOR KNOWLEDGE

Short Review

Activity 1: Find My Match Activity

Directions: Fill in each circle to make each given equation correct. Use the numbers at the right.

2. 3x + 5 = x + 15

The teacher may allow group work in performing the activities.

The teacher can give hints clues if he/she finds that learners have difficulty answering the activity.

1.
$$2a + 4 = 10$$

 $a = 3$

$$a = 0$$
2. $3x + 5 = x + 15$

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LESSON PURPOSE/INTENTION	Lesson Purpose The Road Trip Query Two friends Angelo and John are having a road trip when they pass a road sign that says "Speed Limit 60kph". Angelo asked his friend "If we need to travel for 240 kilometers to our destination? How long are we going to travel?" Guide Question: 1. Give the distance formula. 2. What is asked in the problem? 3. How would you answer Ben's question if you were John?	
LESSON LANGUAGE PRACTICE	Unlocking Content Vocabulary Literal Equations - an equation involving two or more variables. Unlike traditional equations where you often solve for one variable in terms of numbers, in literal equations, you solve for one variable in terms of the other variable.	After giving the meaning of a literal equation, ask them about formulas they know or used in their math lessons. You can also ask them the meaning of the variables used in the formula.
DURING/LESSON PROP	ER	
READING THE KEY IDEA/STEM	SUB-TOPIC 1: Solving One Variable in Terms of the other Variable 1. Explication Example 1: Below is the solution to finding the rate using the distance formula $d = rt$. Fill in the blank with the Property of Equality to explain its steps. $d = (r)(t)$ Given $(d) \frac{1}{r} = (r)(t)(t) = (r)(t)(t)(t)$ Multiplication Property of Equality (Multiply (to both sides of the equation.)	Let the learners recall the properties of equality they have discussed in the previous lessons. Take Note! If learners are not familiar with the Symmetric Property of Equality, inform them that if a = b, then b = a. In other words, if one side of an equation is equal to the other side, then the two sides are interchangeable. If learners are confused

= t	Simplify		about solving for the unknown, give them hints on what to do next. They
By Symmetric Prop time	erty of Equality,	therefore, if the	can follow the step-by-step process and emphasize the property of
is to be solved, the	formula will be	t =	equality being applied in each step.
Example 2: Solve for 2w. Some solutions in its steps are give	and Properties	-	
P = 2I + 2w P - 2w = 2I + 2w - 2	Give w	n	
P ^d 2w = 2l			
of	Multip	olication Property	
of .	Ed Simp	quality _{lifv}	
			1
time is to be solved, the			
time is to be solved, the wor	formula will be $\it l$	= -	
time is to be solved, the w or Example 3: Solve for area	formula will be $\it l$	= -	
is to be solved, the w or Example 3: Solve for area of a triangle A =	formula will be ℓ or height h in the	= -	
is to be solved, the w or Example 3: Solve for area of a triangle A =	formula will be <i>l</i> or height h in the	= -	

= h
By Symmetric Property of Equality, therefore, if h is
to be solved in A = bh, the formula will be
$h = \frac{2A}{b}$
2A
b

DEVELOP NG and
DEEPENING
UNDERSTANDING OF
THE KEY IDEA/STEM

Pair activity: Identifying variables in given formulas.

Objective:

Students will identify variables in different formulas and determine their meanings in context.

A. Solve each literal equation.

Unknown Variable	Formula	Concept
S	P = 4s	Perimeter of a Square
W	P = 21 + 2w	Perimeter of a Rectangle

ANSWER:

Given: P = 4s $P\left(\frac{1}{4}\right) = 4s\left(\frac{1}{4}\right)$ $\frac{P\left(\frac{1}{4}\right)}{\frac{q}{4}} = s \quad \text{Therefore, applying Symmetric Property of Equality, s} = \frac{P}{4}.$

Solution for #4 Given: A = 21 + 2w; w = 7 A = 21 = 21 - 21 + 2w A = 21 = 22 - 21 + 2w A = 21 = 2w $(A = 20) {1 \choose 2} = (2w) {1 \choose 2}$ $\frac{-2!}{2!} = w$ Therefore, applying Symmetric Property of Equality, $w = \frac{A-2!}{2}$ or $w = \frac{A}{2} - l$.

AFTER AFTER/POST-LESSON

MAKING GENERALIZATIONS AND ABSTRACTIONS	Making Generalizations Learners create a "One-Minute Paper" where they write down the most important concept they learned and a question they still have. Then, they pair up to discuss their insights and clarify doubts.	
EVALUATING LEARNING	 Short quiz on identifying variables and solving for one variable: Given the formula A = πr², solve for r. The equation P = 2L + 2W represents the perimeter of a rectangle. Solve for W. If V = lwh represents the volume of a rectangular prism, solve for h. 	ANSWER: 1. Answer: $r = \sqrt{(A/\pi)}$ 2. Answer: $W = (P - 2L)/2$ 3. Answer: $h = V / (lw)$
ADDITIONAL ACTIVITIES FOR APPLICATION OR REMEDIATION (IF APPLICABLE)		

REMARKS	
REFLECTION	

Prepared by:	Reviewed by:
	
Subject Teacher Teacher	Master Teacher/Head