

**MATATAG**

Bansang Makabata



Batang Makabansa



BAGONG PILIPINAS

School
Logo

Name of School:		Quarter:	4th 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 COMPETENCIES 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		
III. LEARNING RESOURCES		
A. REFERENCES	Amusing Algebra. (2024). Solving literal equations clue mystery activity. https://www.teacherspayteachers.com/Product/Solving-Literal-Equations-Clue-Mystery-Activity-6109358?st=e2ed7bee0bf6ad1824978c9f5fd01822 Cachet. (2014, July 25). Rate-Time-Distance problems (Powerpoint slides). https://www.slideserve.com/cachet/4-8-rate-time-distance-problems	

	Chilimath. (2024). Solving Literal Equations. Chilimath. https://www.chilimath.com/lessons/intermediate-algebra/literal-equations/ Glencoe & McGraw-Hill. (n.d.). Teaching Algebra with Manipulatives. Sault Area Public Schools. https://www.saultschools.org/cms/lib/mi17000143/centricity/domain/137/a2tam.pdf Metropolitan Community College. (n.d.). Solving Literal Equations. Metropolitan Community College. https://mcckc.edu/tutoring/docs/blue-river/math/equat_inequ/Practice_Solving_Literal_Equations.pdf Oronce, O.A., et al (2007). e-math I Elementary Algebra. Rex Bookstore, Inc. Sampaloc, Manila Pleacher, D. (n.d.). Equation Analysis Test #2. Pleacher. https://www.pleacher.com/mp/puzzles/mathpuz/eqtstan3.html2 S2Tem Centers. (2019). Literal Equations Breakout. S2Tem Centers. https://www.s2temsc.org/uploads/1/8/8/7/18873120/solvingliteralequationsbreakout.pdf Studylib. (n.d.). Equation Analysis Assessment. Studylib. https://studylib.net/doc/9713503/equation-analysis-assessment
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B. OTHER LEARNING RESOURCES	
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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. 1. $2a + 4 = 10$ $a =$ 2. $3x + 5 = x + 15$ $x =$ 3. $7a -$ $= 6$ $a =$ 4. $3x -$ $=$ $x =$ 1 2 3 4 5	The teacher may allow group work in performing the activities. The teacher can give hints or clues if he/she finds that learners have difficulty answering the activity. 1. $2a + 4 = 10$ $a =$ 3 2. $3x + 5 = x + 15$ $x =$ 5 3. $7a -$ 1 $= 6$ $a =$ 1 4. $3x -$ 2 $=$ 4 $x =$ 2
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	$= t$ Simplify By Symmetric Property of Equality, therefore, if the time is to be solved, the formula will be $t =$ Example 2: Solve for l in the literal equation $P = 2l + 2w$. Some solutions and Properties of Equality used in its steps are given. $P = 2l + 2w$ Given $P - 2w = 2l + 2w - 2w$ $P - 2w = 2l$ _____ Multiplication Property of Equality _____ Simplify By Symmetric Property of Equality, therefore, if the time is to be solved, the formula will be $l =$ _____ - w or _____. Example 3: Solve for height h in the formula of the area of a triangle $A =$ _____ bh Given $A (2) = (\quad) (2)$ $2A = bh$ $\frac{P - 2w}{2}$ $2A (\quad) = bh (\quad)$	about solving for the unknown, give them hints on what to do next. They can follow the step-by-step process and emphasize the property of equality being applied in each step.
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$$= h$$

By Symmetric Property of Equality, therefore, if
h is

to be solved in $A =$ bh , the formula will
be

$$h = \frac{2A}{b}$$

$$\frac{2A}{b}$$

DEVELOPING 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. <table border="1" data-bbox="467 499 1159 720"> <thead> <tr> <th>Unknown Variable</th><th>Formula</th><th>Concept</th></tr> </thead> <tbody> <tr> <td>S</td><td>$P = 4s$</td><td>Perimeter of a Square</td></tr> <tr> <td>w</td><td>$P = 2l + 2w$</td><td>Perimeter of a Rectangle</td></tr> </tbody> </table>	Unknown Variable	Formula	Concept	S	$P = 4s$	Perimeter of a Square	w	$P = 2l + 2w$	Perimeter of a Rectangle	ANSWER: Given: $P = 4s$ $P\left(\frac{1}{4}\right) = 4s\left(\frac{1}{4}\right)$ $\frac{P}{4} = s$ Therefore, applying Symmetric Property of Equality, $s = \frac{P}{4}$ Solution for #4 Given: $A = 2l + 2w$; $w = ?$ $A - 2l = 2l - 2l + 2w$ $A - 2l = 2w$ $(A - 2l)\left(\frac{1}{2}\right) = (2w)\left(\frac{1}{2}\right)$ $\frac{A - 2l}{2} = w$ Therefore, applying Symmetric Property of Equality, $w = \frac{A - 2l}{2}$ or $w = \frac{A}{2} - l$.
Unknown Variable	Formula	Concept									
S	$P = 4s$	Perimeter of a Square									
w	$P = 2l + 2w$	Perimeter of a Rectangle									
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 $A = \pi r^2$, 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: Answer: $r = \sqrt{A/\pi}$ Answer: $W = (P - 2L)/2$ Answer: $h = V / (lw)$									
ADDITIONAL ACTIVITIES FOR APPLICATION OR REMEDIATION (IF APPLICABLE)											

<i>REMARKS</i>		
<i>REFLECTION</i>		

Prepared by:

Subject Teacher
Teacher

Reviewed by:

Master Teacher/Head