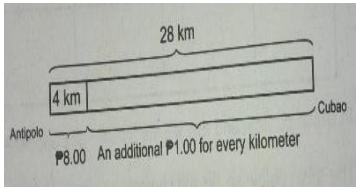


 GRADES 1 to 12 DAILY LESSON LOG	School:		Grade Level:	VI
	Teacher:		Learning Area:	MATHEMATICS
	Teaching Dates and Time:	(WEEK 5)	Quarter:	3RD QUARTER

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
I. OBJECTIVES	The learner.....				
A. Content Standard	demonstrates understanding of sequence in forming rules, expressions and equations.				
B. Performance Standard	is able to apply knowledge of sequence, expressions, and equations in mathematical problems and real-life situations.				
C. Learning Competencies / Objectives	gives the translation of real-life verbal expressions and equations into letters or symbols and vice versa. M6AL-IIIe-16 defines a variable in an algebraic expression and equation. M6AL-IIIe-17 represents quantities in real-life situations using algebraic expressions and equations. M6AL-IIIe-18				
II. CONTENT	Patterns and Algebra	Patterns and Algebra	Patterns and Algebra	Patterns and Algebra	BONIFACIO DAY
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide pages	21 ST Century Mathletes, p.85-90	21 ST Century Mathletes, p.85-90	21 ST Century Mathletes, p.91-93	21 ST Century Mathletes, p.91-93	
2. Learner's Materials pages	21 st Century Mathletes 6, 200-209	21 st Century Mathletes 6,	21 st Century Mathletes 6	21 st Century Mathletes 6,	
3. Textbook pages	21 st Century Mathletes 6	21 st Century Mathletes 6	21 st Century Mathletes 6	21 st Century Mathletes 6,	
4. Additional Materials from Learning Resource (LR) Portal					
B. Other Learning Resources	Mathletes 6 textbook, video clip, power point presentation	Mathletes 6 textbook, video clip, power point presentation, drawings of patterns, picture cards	Mathletes 6 textbook, video clip, power point presentation	Mathletes 6 textbook, video clip, power point presentation	
IV. PROCEDURES					
A. Reviewing previous lesson or presenting the new lesson	Drill: Given the ff. scenarios, ask the pupils which of the four basic operations is involved.	Drill: 1.The cafeteria bought lots of frozen pizzas to serve. If you know the total amount of	Drill: Identify the number that should be in place	Write the expression for the following: 1. Seventy-five decreased by five	

	1.Ruth had typed 12 pages of her research paper during the first day. On the second day she typed 14 pages. How many pages did she type in all? 2. Johann was given Php200 by his mom. His younger brother Drake borrowed Php20 from him. How much money did he have left? 3. Bless is 9years old. Her older brother Ed is twice as old as she is. How old is Ed? 4. Mrs. Cruz brought home a 2000 ml bottle of orange juice. She divided this equally among her five children. How much did each child receive? Review: Supply the next 3 terms. 1.)Z, X, V,..... 2.)a + b, 2c + 2d, 3e + 3f 3.)$\frac{1}{4}$, $\frac{2}{5}$, $\frac{3}{6}$, 4.)10, 15, 20, 5.)$\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{15}$	money they spent and how many pizzas they bought, how could you figure out the cost of 1 pizza? Why do you believe that? What is the action of this operation? (You would divide the total cost by the number of pizzas to find the cost of one pizza. Division separates the money spent into equal stacks. Each stack represents the cost of one pizza. Division separates a quantity into equal parts.) 2.)Pete bought some candy and gave some of the pieces to his best friend, Hal. How could you figure out how many pieces Pete has left? Why do you believe this? What is the action of the operation? (Subtract the number of pieces he gave to a friend from the number of pieces he purchased. You are starting with the whole, taking away a part so what is left is the other part. The subtraction action is to take away, or compare by finding the difference.) 3. Bob and Tyler do not have enough money to buy a box of donuts, but they have the exact amount needed if they combine their money. How would you find the cost of a box of donuts? What is the action of this operation? (You would find the sum of Bob's and Tyler's money. Combine is the action of addition.)	of the question mark to make the mathematical statement correct. $? + 5 =22$ $72/? =8$ $19 = ? - 12$ $7 + 2 = 3 + ?$ $21 \times ? =63$ Review: Translate the ff. word phrases to algebraic expressions 1.Five times the sum of a and b 2.Twelve decreased by twice x 3.the ratio of 11 and thrice p Translate the ff. algebraic expressions to word phrases 4.)$51 -(x+5)$ 5.) $7 (2-x)$ 6. $\frac{x+3}{2}$	2.Fourteen divided by the sum of three and four 3.Triple the sum of eleven and six 4.One more than the product of six and eight 5.Twenty plus five less than eighty 6.Take away 10 from 50 7.Four more than twice three 8.Difference of 17 and 8 9. fifteen more than the quotient of seventy-two and nine 10. one hundred twenty increased by nineteen Review: Give the Expressions of the ff. verbal phrases <table><tr><th colspan="2">Verbal Phrase</th></tr><tr><td>The sum of six and a number</td><td></td></tr><tr><td>Eight more than a number</td><td></td></tr><tr><td>A number plus five</td><td></td></tr><tr><td>A number increased by seven</td><td></td></tr><tr><td>A number decreased by nine</td><td></td></tr><tr><td>Ten times a number</td><td></td></tr><tr><td>Seven divided by a number</td><td></td></tr></table> Answer: <table><tr><th>Verbal Phrase</th><th>Expression</th></tr><tr><td>The sum of six and a number</td><td>$6 + x$</td></tr><tr><td>Eight more than a number</td><td>$y + 8$</td></tr><tr><td>A number plus five</td><td>$n + 5$</td></tr><tr><td>A number increased by seven</td><td>$x + 7$</td></tr><tr><td>A number decreased by nine</td><td>$n - 9$</td></tr><tr><td>Ten times a number</td><td>$10 \cdot n$ or $(10n)$</td></tr><tr><td>Seven divided by a number</td><td>$\frac{7}{x}$</td></tr></table>	Verbal Phrase		The sum of six and a number		Eight more than a number		A number plus five		A number increased by seven		A number decreased by nine		Ten times a number		Seven divided by a number		Verbal Phrase	Expression	The sum of six and a number	$6 + x$	Eight more than a number	$y + 8$	A number plus five	$n + 5$	A number increased by seven	$x + 7$	A number decreased by nine	$n - 9$	Ten times a number	$10 \cdot n$ or $(10n)$	Seven divided by a number	$\frac{7}{x}$
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		4. Macy wants to buy each of her classmates a Coke. How would you figure out the cost? What is the action of this operation? (You would multiply the cost of the Coke by the number of classmates. Repeated addition of the same value is multiplication)			
B. Establishing a purpose for the lesson	Present the ff. road signs. (TG p.188) ask the class if they can identify and explain the meaning of each sign.  Ask if they can give other road signs aside from the road signs presented. 	Show picture of the president Duterte. Ask: What expression describes President Rodrigo Duterte? If we use expressions to describe our President, we also use expressions in Mathematics, to describe relationships between numbers and the operations being used. 	Allow the pupils to find a partner. One member of the pair is to make his or her own word phrase and the other member is to translate it into algebraic expression. Then, the two members exchange roles. Ask some volunteer pairs to share their word phrases and algebraic expressions to the class. Write these on the board.	<i>Show the video of the "Variables Song". Let the pupils sing that song.</i>	
C. Presenting Examples/Instances of new lesson	Ask the pupils the ff. question: The jeepney fare for the first 4km is ₱8.00 and an additional ₱1.00 for every km. Richie will go to Cubao from Antipolo. The distance from Antipolo to Cubao is about 28 km. how much does she need to pay? <i>Answer:</i> Study the illustration below:	Define an expression for students, "A math phrase without an equal or inequality sign." Tell students that expressions are solved. This lesson is to translate written words to numbers, operational symbols, and variables. Remind students that a variable is a placeholder for one or more numbers. "Some number" is a phrase that indicates a variable is needed.	Present the ff. situation to the class: Maricel buys 5 star apples for ₱5.00 each and 3 guyabanos for ₱32.50 each. She gives the cashier a ₱200.00 bill. Write an expression for the total cost of the fruits she buys	<i>Present the video "Variables and Algebraic Expression"</i>	



If the first 4 km is ₱8.00, we need to find the amount of fare for the remaining distance to get the amount which Richie needs to pay. The remaining distance is 24 km. Let $y =$ the fixed amount of ₱1.00 for every km. to find the total amount fare, we will use the expression $24y + 8$.
Evaluate:
 $24y + 8 \rightarrow 24(1) + 8 = 32$
Therefore, Richie needs to pay ₱32.00

Show pupils how to break down a verbal expression, beginning with simple expressions.
a.Example: Given "some number increased by 5", ask students, "What action is happening in this phrase?" (Answer: We are making larger, joining to, adding to). Then ask, "What operation indicates this action?" (Answer: Addition) $x + 5$
b.Example: Given "51 less than some number." Ask students, "What action is happening in this phrase?" (Answer: We are decreasing, going down, subtracting). Then ask, "What operation indicates this action?" (Answer: Subtraction) $x - 51$; taking away from the x .
Discuss the role *and* plays in this written sentence.
Example: Sum of 12 *and* e .
 $(12 + e)$
Tell students that they have to read very carefully using context clues to determine what action is required. They will need to reread some problems in order to focus on the needed information.

and an equation for the amount of change the cashier should give her.
Discuss the answer to the situation. See page 232-233 of the textbook

D. Discussing new concepts and practicing new skills #1

Consider this problem:
Glen is a newly hired messenger in a multinational company in Makati. As a trainee, he needs to wear a polo-shirts everyday. He was given a clothing allowance of ₱6,000.00. how many polo-shirt can he buy using this amount?

Brand	Price per Shirt	Numerical Expressions	Number of Shirts
Brand A	₱100.00	$100x + 500$	12
Brand B	₱100.00	$100x + 500$	12
Brand C	₱100.00	$100x + 500$	12
Brand D	₱100.00	$100x + 500$	12
Brand E	₱100.00	$100x + 500$	12

The answer to the question depends on the brand of clothes he will buy. In the table, the numerical expressions for each brand are given. For the number of shirts that he can buy, the answer is 12 shirts. If you do not know the price of a polo shirt, we can use a variable to represent it.

DEFINITIONS

- A numerical expression is an expression that contains numbers and one or more operation symbols.
- A variable is any letter or symbol that represents a number.
- A constant has a fixed value that does not change.
- An algebraic expression is a mathematical phrase that uses variables, numbers, and operation symbols.

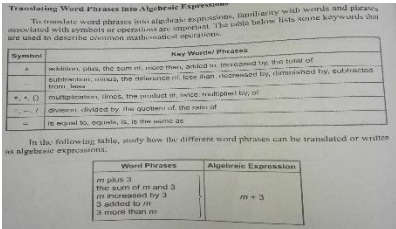
Discuss the contents on page 225-226 of Mathletes textbook.

Group Activity:
Translate each phrase or sentence into a mathematical expression or equation.

- Twelve more than a number.
SOLUTION: $12+x$
- Eight minus a number.
SOLUTION: $8-x$
- An unknown quantity less fourteen.
SOLUTION: $x-14$
- Six times a number is fifty-four.
SOLUTION: $6x=54$
- Two ninths of a number is eleven.
SOLUTION: $\frac{2}{9}x=11$
- Three more than seven times a number is nine more than five times the number.
SOLUTION: $3+7x=9+5x$
- Twice a number less eight is equal to one more than three times the number.
SOLUTION: $2x-8=3x+1$ or $2x-8=1+3x$

Deepening:
Define the ff. term:
Equation a mathematical sentence with an equal sign (=) which shows that two expressions or both sides are equal.
Give the ff. equation and explain which is the left member and which is the right member. $3x + 5 = 20$
Common words Translated as = equal or equals is/are is equal to result is yields
Tell the pupils that this time , you will be translating sentences instead of phrases. The technique is very much the same as the previous lesson except that this time, it already involves the equal sign and on either side of the equal sign is a phrase that is represented by an algebraic expression.

Show a video of "Translating Verbal Expressions into Algebraic Equations"
Write a variable expression to represent each of the following:
1.The sum of a number and twelve.
2.The difference between a number and eight.
3.Three times a number
4.A number squared plus five
5.A number divided by two plus seven
6.Four times the quantity of a number plus six
7.A number times two divided by four
8.A number times six plus the same number times two
9.A number squared plus seven take a way four
10.A number divided by three plus twelve
11.A number times five and another number times six
12.Sixteen less than a number times negative four
13.A number times eight divided by two
14.A number divided by six and another number times negative five
15.A number divided by four plus another

				number divided by sixteen	
E. Discussing new concepts and practicing new skills #2	To translate word phrases into algebraic expressions, familiarity with words and phrases associated with symbols or operations are important. The table (on page 226) lists some keywords that are used to describe common mathematical operations.  Discuss examples 1-3 on page 227-228 of Mathletes txbk.	Discuss examples 4-5 on page 228-229 of Mathletes txbk. <i>Show the video of “Learn to translate algebraic expressions into word”</i>	Discuss examples 1-5 on how to translate verbal phrases or sentences to algebraic equations. Give the ff. examples. Show how you translate the first example, then ask the pupils to translate the rest. Again, allow the pupils to use a letter they prefer for the variable. Translate the ff. into an algebraic equation. The sum of a number and five is twelve. Twice a number decreased by six is equal to sixteen. If nine is added to the difference of a number and nineteen, the sum is ninety. Twice the sum of a number and two is twenty-two. The product of thirteen less than thrice a number and five will result to forty-five.	Discuss examples 5-8 on how to translate verbal phrases or sentences to algebraic equations. Translate the ff. into an algebraic equation. A number decreased by seven is fifteen. A number increased by fifty-five is equal to eighty-eight. Twelve times a number is sixty The quotient of a number and nine is one hundred thirty-five. The sum of a number and forty-six is one hundred twenty-five.	
F. Developing mastery	Group Activity: <i>Translate in algebraic symbols.</i>	Group Activity: <i>Translate in algebraic symbols.</i>	Group Activity: <i>Give the ff. scenarios and ask</i>	Translate each algebraic equation into words.	

(Leads to Formative Assessment)	1. twice a number x added to 10 Ans: $2x + 10$ 2. A number n decreased by five Ans: $n - 5$ 3. a number and multiplied by 7 Ans: $7y$ Translate algebraic symbols into mathematical statement. 4.) $2x + y$ (this can be stated as :) twice the sum of x and y two times x increased by y and more than twice x x exceeds by twice y 5.) $x - 3y$ x minus thrice y thrice y subtracted from x three times y less than x x diminished by thrice y 6.) $x / y - 2z$ the quotient of x and y decreased by twice z x divided by y less twice z twice z less than the quotient of x and y the difference between the quotient of x and y, and twice z Afterwards, call on students to share their responses and justify their answers.	1.) twice a number a divided by three Ans: $2a / 3$ 2.) five times a number x minus four Ans: $5x - 4$ 3.) Thrice the sum of a number x and six Ans: $3(x + 6)$ 4.) A number x is divided by two added to seven Ans: $7 + x / 2$ Translate algebraic symbols into mathematical statement. 5.) $5x + 2y$ the product of five X added to the product of two and y the sum of five times x and two times y five times x increased by twice y twice and more than five times x Afterwards, call on students to share their responses and justify their answers.	pupils to do what is asked in the problem. 1. Mr. and Mrs. Panem own a laundry shop. They had 134 customers this week, 18 fewer than last week. Write an algebraic equation for the number of customers they had last week. 2. Aling Martha, when asked about her age, replies "I am six years older than twice the age of my youngest child." Express her age in algebraic equation if her age now is 66. 3. Grade 6 basketball team scored three less than thrice as many points as their opponent. Their total score at the end of the game was 108. Write an algebraic equation for the number of points they scored. Afterwards, call on students to share their responses and justify their answers.	$2n + 5 = 45$ $n = 10 (7+11)$ $n + 15 = 35 - n$ $= 20 \quad \frac{n}{5}$ $2(n + 6) = 22$ Write a variable expression to represent each of the following: Four times ten divided by five Twelve diminished by two Six times three added to seven Eight added to the product of five and three Twenty-five added to two Three times twenty-five less twenty The sum of three and thirty-nine divided by seven Afterwards, call on students to share their responses and justify their answers. Encourage other students to contribute to the dialogue	
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			Encourage other students to contribute to the dialogue		
G. Finding practical applications of concepts and skills in daily living	Pair-share: Write an expression for each of the following: - add 4 and 8, then multiply by 3 - subtract 9 from 14, then multiply by 2 - subtract 7 from 24, then divide by 6 - the quotient of a number and 4 - the product of 23 and twice a number - times the sum of 9 and a number y 15 less than 7 times a number Answers: $(4 + 8)3$ $(14 - 9)2$ $(24 - 7)/6$ $n/4$ $23(2n)$ $5(9 + y)$ $7n - 15$	Pair-share: Translate into verbal phrases. $3x - 4$ $n + 8$ $2/x + y$ $5y - 2$ $2x + 3$ Translate in algebraic symbols. - eight times a number x increased by three. - five times a number n added to six. - fifteen added to the quotient of a number y and two. - twenty four multiplied by the sum of x and y. - the sum of the number n and seven multiplied by two.	Translate each phrase or sentence to a mathematical expression or equation. - A number minus the opposite of negative one. - A number minus the opposite of negative twelve. - Eleven added to three times a number. - Six plus five times an unknown number. - Twice a number minus seven equals four. - Ten times a quantity increased by two is nine. - When fourteen is added to two times a number the result is six. - Four times a number minus twenty-nine is eleven. - Three fifths of a number plus eight is fifty. - When four thirds of a number is increased by twelve, the result is five.	Translate each phrase or sentence to a mathematical expression or equation. - A quantity less twelve. - Six more than an unknown number. - A number minus four. - A number plus seven. - A number increased by one. - A number decreased by ten. - Negative seven added to some number. - Negative nine added to a number. - A number plus the opposite of six. - A number minus the opposite of five.	

H. Making generalizations and abstractions about the lesson	What is an algebraic expression? How do you translate real-life verbal expressions and equations into letters or symbols and vice versa You need to read very carefully using context clues to determine what action is required. They will need to reread some problems in order to focus on the needed information.					What i algebr expres ? How you transla real-life verbal expres s and equatio into let or sym and vic versa
I. Evaluating Learning	Evaluate A (1-30), pages 229-230 of 21 st Century Mathletes Textbook	Evaluate A (31-40) & B (1-5), pages 230 of 21 st Century Mathletes Textbook	Translate each sentence into algebraic equation. 1.A number increased by four is twelve. 2.A number decreased by nine is equal to eleven. 3.Five times a number is fifty 4.The quotient of a number and seven is eight. 5.The sum of a number and ten is twenty. 6.The difference between six and a number decreased by four. 7.Three times a number increased by six is fifteen.	Translate each algebraic equation into words. (Page 236 of 21 st Century Mathletes)		

			8.Eight less than twice a number is sixteen. 9.Thirty is equal to twice a number decreased by four. 10.If four times a number is added to nine, the result is forty-nine.		
J. Additional activities for application and remediation	Instructions: Write the expression or equation in algebraic form. 1. 3 times the quantity mm minus 7 2. What is an algebraic expression for "3 less than the product of 2 and a number x"? 3.12 more than a number. 4. six times the difference of a number and 9.	Answer Math Challenge on page 231	Instructions: Write the expression or equation in algebraic form. 1. two times a number plus 9 2. 7 less than the product of 12 and a number 3. x minus twenty divided by two times x 4.describe 8 times x plus 3. 5. Three times some number plus eleven	Answer Math Challenge on page 237	
V. Remarks					
VI. REFLECTIONS					
A. No. of learners who earned 80% on the formative assessment					
B. No. of learners who require additional activities for remediation who scored below 80%					

C. Did the remedial lessons work? No. of learners who have caught up with the lesson					
D. No. of learners who continue to require remediation					
E. Which of my teaching strategies worked well? Why did this work?					
F. What difficulties did I encountered which my principal or supervisor can help me solve?					
G. What innovation or localized materials did I use/discover which I wish to share with other teachers?					