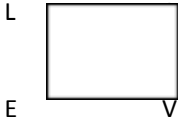
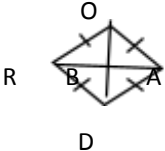


DAILY LESSON LOG OF M9GE-IIIe-1(Day Two)

School		Grade Level	Grade 9
Teacher		Learning Area	Mathematics
Teaching Date and Time		Quarter	Third
I. OBJECTIVES	<i>Objectives must be met over the week and connected to the curriculum standards. To meet the objectives, necessary procedures must be followed and if needed, additional lessons, exercises and remedial activities may be done for developing content knowledge and competencies. These are assessed using Formative Assessment Strategies. Valuing objectives support the learning of content and competencies and enable children to find significance and joy in learning the lessons. Weekly objectives shall be derived from the curriculum guides.</i>		
A. Content Standards	The learner demonstrates understanding of key concepts of parallelograms and triangle similarity.		
B. Performance Standards	The learner is able to investigate, analyze, and solve problems involving parallelograms and triangle similarity through appropriate and accurate representation.		
C. Learning Competencies/ Objectives	Learning Competency: Solves problems involving parallelograms, trapezoid, and kites(M9GE-IIIe-1) Learning Objectives: 1. Identify the properties and theorems of a parallelogram 2. Solve problems involving rectangle, rhombus, and square 3. Show critical thinking skills in solving problems involving rectangle, rhombus, and square		
II. CONTENT	Solving Problems Involving Special Parallelograms		
III. LEARNING RESOURCES			
A. References	Teacher’s guide, Learner’s module Oronce, O.& Mendoza, M.(2014). e-math 9. Rex Bookstore, Inc. Sampaloc, Manila. Dacanay, C. et. al.(2017).Empowering Through Math 9.Ephesians Publishing Inc., Quezon City.		
1. Teacher’s Guide pages			
2. Learner’s Materials pages	pp. 309-344		
3. Textbook pages	Empowering Through Math 9, pp.222-228 e-math 9, 238-269		
4. Additional Materials from Learning Resource (LR) portal			
B. Other Learning Resources /Materials	activity sheets, instructional materials		
IV. PROCEDURES	<i>These steps should be done across the week. Spread out the activities appropriately so that pupils/students will learn well. Always be guided by demonstration of learning by the pupils/ students which you can infer from formative assessment activities. Sustain learning systematically by providing pupils/students with multiple ways to learn new things, practice the learning, question their learning processes, and draw conclusions about what they learned in relation to their life experiences and previous knowledge. Indicate the time allotment for each step.</i>		
A. Review previous lesson or presenting the new lesson	The teacher lets the students recall and identify the properties and theorems on parallelograms by answering the activity below with a partner. Directions: Complete the following statements. 1. A rectangle, rhombus, and _____ are all parallelograms. 2. A rectangle has four _____ angles and a rhombus has four _____ sides. 3. A _____ is both a rectangle and a rhombus. 4. A parallelogram is a rectangle if: • it has one _____ angle; • its diagonals are _____. 5. A parallelogram is a rhombus if: • its one pair of consecutive sides are _____; • its diagonals are _____. • one diagonal bisects one pair of _____ angles. 6. A parallelogram is a square if it has a right angle and two _____ adjacent sides.		

	Answer key: 1. square 2. right, congruent 3. square 4. right, congruent, 5. congruent, perpendicular, opposite 6. congruent The teacher calls some students to share to the class the answer for each number and ask the students the following guide question: 1. What are the properties of a parallelogram? Are these properties also true to that of a rectangle, rhombus, and square? Explain your answer. <i>Properties of a parallelogram(see page 344 of the Learner’s Module)</i> <i>Yes. Squares have all the properties of rectangles and rhombuses. Because rectangles and rhombuses are both parallelograms, they have all the properties of a parallelogram.</i> 2. What are the theorems on a rectangle? rhombus? square? <i>(See page 344 of the Learner’s Module)</i>
B. Establishing a purpose for the lesson	The teacher explains to the students that there are a lot of real-life situations or problems that can be modelled or solved using the properties or theorems on rectangle, rhombus, and square. And to be able to solve these problems easily, one must memorize or familiarize the properties and theorems about the parallelograms, rectangles, rhombus, and square.
C. Presenting examples/ instances of the new lesson	The teacher explains and illustrates how to solve problems involving parallelograms. He/she explains the following steps in solving each problem: 1. Read and understand the problem/situation given. 2. Identify the property/theorem to be used base on the parallelogram given. 3. Formulate the equation. 4. Solve the equation. 5. Check your solution/s. 1. Quadrilateral LOVE is a rectangle.  a. Given: $m\angle E = (x + 40)^\circ$ and $m\angle V = (2x - 10)^\circ$. Find the value of x. <i>Solutions: A rectangle has four right triangles.</i> $m\angle E = 90$ $x + 40 = 90$ $x = 50$ or $m\angle V = 2x - 10$ $2x - 10 = 90$ $2x = 100$ $x = 50$ b. Given: $LV = 3x + 1$ and $EO = 21 - 2x$. Find the value of x. <i>Solutions: Diagonals of a rectangle are congruent.</i> Hence, $LV = EO$ $3x + 1 = 21 - 2x$ $x = 4$ 2. Quadrilateral ROAD is a rhombus. If $m\angle ROA = 108^\circ$, find: a. $m\angle ROB$ b. $m\angle ORB$ c. $m\angle ORD$  Solution: 1. In the rhombus, diagonal OD bisects $\angle ROA$ and $\angle RDA$. So, $m\angle ROA = 108^\circ = 2m\angle ROA$ Thus, $m\angle ROB = 54^\circ$. 2. In right $\triangle ROB$, acute angles $\angle ROB$ and $\angle ORB$ are complementary.

	$m\angle ORB = 90^\circ - m\angle ROB$ $= 36^\circ$ 3. $m\angle ORD = 2m\angle ORB$ $= 2(36^\circ)$ $= 72^\circ$ C. Quadrilateral CART is a square. Find $m\angle TPC$ and $m\angle TAC$. $m\angle TPC$ $m\angle TAC$ <i>Solutions:</i> $m\angle TPC = 90^\circ$ $m\angle TAC = 45^\circ$ R T P A C
D. Discussing new concepts and practicing new skills #1	The teacher lets the students, in groups of three, answer the following. - If SAME is a rhombus with $\angle AMS = (9x + 15)^\circ$ and $\angle EMS = (8x + 17)^\circ$, find $m\angle ESA$. <i>Answer: $m\angle ESA = 66^\circ$</i> - If SAME is a square with $AR = (x+5)$ cm and $MS = (4x - 6)$ cm, Find RE. <i>Answer: $RE = 13$</i> The teacher calls some students to show and explain the solutions of the activity.
E. Discussing new concepts and practicing new skills #2	
F. Developing mastery (leads to formative assessment 3)	
G. Finding practical applications of concepts and skills in daily living	The teacher lets the students reflect on the following question: Why do you think there many objects that are rectangular in shape? (Student's answers may vary)
H. Making generalizations and abstractions about the lesson	The teacher lets the students summarize the lesson by answering the following questions: - What are the steps in solving problems involving rectangle, rhombus, and square? - What are the properties/theorems of a rectangle? rhombus? square? Answers: - Read and understand the problem/situation given. - Identify the property/theorem to be used base on the parallelogram given. - Formulate the equation. - Solve the equation. - Check your solution/s. <i>Properties of a Rectangle:</i> - All the properties of a parallelogram - It has four right angles. - Its diagonals are congruent. - Each diagonal bisects the angles of the rhombus. <i>Properties of a Rhombus:</i> - All the properties of a parallelogram - It has four congruent sides. - All the properties of a rhombus. - Each diagonal bisects the angles of the rhombus. <i>Properties of a Square:</i> - All the properties of a parallelogram - All the properties of a rectangle. - All the properties of a rhombus.
I. Evaluating Learning	The teacher lets the students, in groups of three, answer the following formative assessment. Formative Assessment # ____ I. Complete each of the following statements. FAYE is a square with diagonals intersecting at V. Given $VE = 7$cm. Complete the statements below. A Y V $FV =$ _____ $AV =$ _____

	3. $AE =$ _____ 4. $m\angle AVY =$ _____ 5. $m\angle FEA =$ _____ F E II. Solve for x and y in each parallelogram. 1. ABCD is a rhombus. Find the value of x if $BC = 3x$ and $CD = x + 2$. A B D C 2. HOPE is a rectangle with diagonals intersecting at W. Given $HO = 8x - 13$ and $EP = 7x + 11$. H O E P W Answer Key: I. i. 1. 7 2. 7 3. 14 4. 90° 5. 45° II. 1. 1 2. 24
J. Additional activities or remediation	
V. REMARKS	
VI. REFLECTION	
A. No. of learners who earned 80% of the evaluation	
B. No. of learners who require additional activities for remediation who scored below 80%	
C. Did the remedial lesson 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 these work?	
F. What difficulties did I encounter 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	Objects inside the classroom that are rectangular in shape
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