	DAILY LESSON LOG of (M9AL-III-2) (Day 2)		
School	Grade Level Grade 9		
Teacher	Learning Area Mathematics		
Teaching Date and Time	Quarter 3 rd DLP NO:		
I. OBJECTIVES			
A. Content Standards	The learner demonstrate understanding of key concepts of quadrilaterals		
D. Dawfarranan Chandarda	(parallelograms, trapezoids, kites)		
B. Performance Standards	The learner is able to investigate, analyze and solve problems involving quadrilaterals (parallelograms, trapezoids, kites)		
C. Learning Competencies / Objectives	Learning Competencies: Proves theorems on trapezoids and kites (M9AL-IIi-1) Learning Objectives: 1. Identify the different theorems of the kite 2. Prove the theorems of the kite 3. Display attentiveness in solving the theorems of the kite		
II. CONTENT	Proving Theorems on Kite		
III. LEARNING RESOURCES			
References			
1. Teacher's Guide pages	219 - 220		
2. Learner's Materials pages	335 - 336		
3. Textbook pages	Grade 9 Mathematics by Gladys C. Nivera, Ph.D. and Minie Rose C. Lapinid, Ph.D. pages. 315 - 318		
4. Additional Materials from Learning Resource (LR) portal			
Other Learning Resources	https://socratic.org/questions/how-do-you-prove-that-a-shape-is-a-kite http://mathforum.org/library/drmath/view/55206.html		
IV. PROCEDURES	http://matmorum.org/hbrary/drmath/view/55206.html		
	The teacher asks the following questions to the students to help them recall on the previous topic.		
	1. What is a trapezoid?2. What are the properties of an isosceles trapezoid?3. What are the conditions of a trapezoid?		
	4. What quadrilateral has two pairs of congruent and adjacent sides? 1. What quadrilateral has two pairs of congruent and adjacent sides?		
A. Review previous lesson or presenting the new lesson	Answers: 1. A trapezoid is a quadrilateral with exactly one pair of opposite sides parallel 2. The properties of isosceles trapezoid are: • Each pair of isosceles angles is congruent. • Diagonals are congruent.		
	 3. The conditions for a trapezoid are: If a pair of base angles of a trapezoid are congruent, then the trapezoid is isosceles If the diagonals of a trapezoid are congruent, then the trapezoid is isosceles. 4. Kite 		
B. Establishing a purpose for the lesson	The teacher lets the students supply the appropriate statement/reason in proving the theorem of a trapezoid.		

C.	Presenting examples/ instances of the new lesson	Trivia for the students: A simple kite would look like this! Kites were invented in China. They were made of split bamboo and silk and were used in the military for signalling and observation. The teacher asks the students the following questions: 1. Do you have a kite? Observe and describe the shape. 2. How many pairs of congruent angles are there? 3. Are the diagonals congruent? Perpendicular? Do they intersect at their midpoints? 4. Do the diagonals bisect the kite's angles? If so, which ones? Answer: 1. Yes. The kite has four sides. 2. Only 1 3. The diagonals are not congruent. The diagonals are perpendicular and it also intersects at their midpoint.
D.	Discussing new concepts and practicing new skills #1	 4. Yes, the diagonals bisect the kite's angle. 1. The teacher asks the student to describe a kite. Answer: A kite is a quadrilateral with two distinct pairs of consecutive sides that are congruent. 2. The teacher presents the properties of a kite using kite DEFG. Properties of a Kite a. Diagonals are perpendicular. EG is perpendicular to DF b. Exactly one pair of opposite angles are congruent. <e <g<="" li="" ≅=""> c. A diagonal bisect each of the noncongruent angles and the other diagonals. Diagonal FD is the angular bisector of < F and <d.< li=""> </d.<></e>
E.	Discussing new concepts and practicing new skills #2	 The teacher presents the two theorems related to kite. Theorem 10: In a kite, the perpendicular bisector of a least one diagonal is the other diagonal. Theorem 11: The area of a kite is half the product of the length of its diagonals. The teacher presents a sample proof of a kite. Given: ABCD is a kite with AB ≅ AD and BC ≅ CD. Prove: ∠A ≅ ∠C Proof: Statements Reasons 1)AB ≅ AD 1) Given 2) BC ≅ CD 2) Given 3) AC ≅ AC 3) Reflexive (common side) 4) △ABC ≅ △ADC 4) SSS Postulates 5) ∠ABC ≅ ∠ADC 5) CPCTC
F.	Developing mastery (leads to formative assessment 3)	The teacher lets the students, in groups of five, prove the following theorem of the kite. The teacher lets the students choose the appropriate statement/proof from the box. The teacher refers to the provided proof on pages 336 to 337 of the LM. For theorem 10. bisect Kite WORD with diagonals Definition of kite Definition of congruent segments

		For theorem 11.	
			e ROPE
		Answer: To the Theorem 10. In a kite, the perpendi the other diagonal. Statements: 1. Kite WORD with diagona Reasons: 2. Definition of kite; 3. Definiti	Is \overline{WR} and \overline{OD} ; 4. \overline{WR} bisect \overline{OD}
		To the Theorem 11. The area of a kite is diagonals. Statements: 1. Kite ROPE; 2. PR bisect Reasons: 5. Substitution; 6. Distribution	OE
G.	Finding practical applications of concepts and skills in daily living		
Н.	Making generalizations and abstractions about the lesson	The teacher asks the students, "What are the Answer: Theorem: In a kite, the perpendicular bother diagonal. Theorem: The area of a kite is half the pro	sisector of a least one diagonal is the
		The teacher instructs the students to prove:	
		Given: AP = BP AQ = BQ	
		Prove: PQ is perpendicular to AB	
I.	Evaluating Learning	/ \	
		PROOF	
		Statements	Reasons
		1. 2.	1. Given 2. Given
		3. PQ = PQ 4. triangle PAQ = triangle PBQ	3
		5. <apr <bpr<="" =="" td=""><td>5. CPCTC*</td></apr>	5. CPCTC*
		6. PR = PR 7. triangle PRA = triangle PRB	6. Reflexive property 7. SAS
		8. m <pra =="" m<prb<="" td=""><td>8. CPCTC*</td></pra>	8. CPCTC*
		9. <pra, <prb="" are="" linear="" pair<="" td=""><td>9. If alt. int. lines are congruent, the lines are parallel</td></pra,>	9. If alt. int. lines are congruent, the lines are parallel
ь		10	10 If 2 /'s are congruent and

		Answer:	
		Given: AP = BP AQ = BQ	
		Prove: PQ is perpendicular to AB	
		P / \ / \	
		A /_R\B	
		PROOF Statements Reasons	
		1. AP = BP 1. Given	
		2. AQ = BQ 2. Given	
		3. PQ = PQ 3. Reflexive property 4. triangle PAQ = triangle PBQ 4. SSS	
		5. <apr 5.="" 6.="" <bpr="" =="" cpctc*="" pr="PR" property<="" reflexive="" th=""><th></th></apr>	
		7. triangle PRA = triangle PRB 7. SAS	
		9. <pra, 9.="" <prb="" alt.="" are="" are<="" if="" int.="" linear="" lines="" pair="" th=""><th></th></pra,>	
		congruent, the lines are parallel	
		10. m <pra 10.="" 2="" <'s="" =="" a="" and="" angle<="" are="" congruent="" each="" form="" if="" is="" linear="" m<prb="90" pair,="" right="" th=""><th></th></pra>	
		11. PQ is perpendicular to AB 11. Def. of perpendicular lines	
		*CPCTC = Corresponding parts of congruent triangles are congruent	
J.	Additional activities or		
•	remediation		
	REMARKS		
VI.	REFLECTION		
VI.	REFLECTION No. of learners who earned 80% of the evaluation No. of learners who require		
VI.	REFLECTION No. of learners who earned 80% of the evaluation No. of learners who require additional activities for		
VI.	REFLECTION No. of learners who earned 80% of the evaluation No. of learners who require		
VI.	No. of learners who earned 80% of the evaluation No. of learners who require additional activities for remediation who scored		
VI. A. B.	No. of learners who earned 80% of the evaluation No. of learners who require additional activities for remediation who scored below 80%		
VI. A. B.	REFLECTION No. of learners who earned 80% of the evaluation No. of learners who require additional activities for remediation who scored below 80% Did the remedial lesson work?		
VI. A. B.	REFLECTION No. of learners who earned 80% of the evaluation No. of learners who require additional activities for remediation who scored below 80% Did the remedial lesson work? No. of learners who have caught up with the lesson.		
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Prepared by:

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