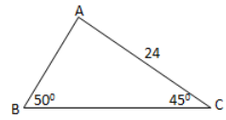
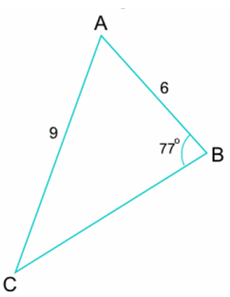
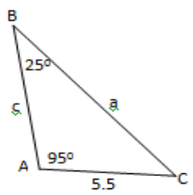
DAILY LESSON LOG of (M9AL-IVh-j-1) (Day 1)							
School			**Grade Level**		**Grade 9**		
Teacher			**Learning Area**		Mathematics		
Teaching Date and Time		**Quarter**	**4th**	DLP NO:			

I. OBJECTIVES	
A. Content Standards	Demonstrate understanding of the basic concepts of trigonometry
B. Performance Standards	Is able to apply the concepts of trigonometric ratios to formulate and solve the real-life problems with precision and accuracy
C. Learning Competencies / Objectives	Learning Competencies: Solves problems involving oblique triangles (M9GE-IVh-j-1) Learning Objectives: 1. State the Law of Sine 2. Use law of sine in solving problems that involve oblique triangles 3. Display interest in solving problems that involve oblique triangles using the law of sine
II. CONTENT	**Solve Problems that Involve Oblique Triangles (Law of Sine)**
III. LEARNING RESOURCES	
References	
1. Teacher's Guide pages	
2. Learner's Materials pages	488 - 489
3. Textbook pages	
4. Additional Materials from Learning Resource (LR) portal	
Other Learning Resources	
IV. PROCEDURES	
A. Review previous lesson or presenting the new lesson	The teacher asks the students: 1. What is an oblique triangle? 2. What is the law of sine? 3. What data are required for solving oblique triangle using the law of sine? Answer: 1. Oblique triangle is a triangle which does not contain any right angle. 2. The law of sine - sine of an angle of a triangle divided by its opposite side is equal to the sine of any other angle divided by its opposite side. 3. The data required for solving oblique triangle using the law of sine are: ● Two angles and one side (SAA Case & ASA Case) ● Two sides and an angle opposite one of these sides (SSA Case)
B. Establishing a purpose for the lesson	The teacher lets the students use the law of sine in solving problems that involve oblique triangles.
C. Presenting examples/ instances of the new lesson	The teacher presents examples of oblique triangles that can be solved using the law of sine. The teacher asks the students the following : 1. How will you classify ΔABC? 2. What are the given data of ΔABC? 

	3. What are the missing part of measurements in ΔABC? Answer: 1. ΔABC is an obtuse triangle . 2. $\angle B = 50^0$; $\angle C = 45^0$; $\overline{AC} = 24$ 3. $\angle A$, $\overline{AB}$; $\overline{BC}$
D. *Discussing new concepts and practicing new skills #1*	The teacher presents and discusses an example that shows how to solve problems that involve oblique triangles using the law of sine. The equation for the Law of Sine is: $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$ To find the missing part measurements of the given triangle, the teacher discusses to the students that they will be using the law of sine because the conditions when to use this law of sine are present. The teacher with the students solves the missing part measurements of the given triangle. *Solve for c:* $\frac{\sin B}{b} = \frac{\sin C}{c}$ $\frac{\sin(50^0)}{24} = \frac{\sin(45^0)}{c}$ $c = \frac{\sin(45^0)(24)}{\sin(50^0)}$ $c = 22$ *Solve for a:* $\frac{\sin A}{a} = \frac{\sin B}{b}$ $\frac{\sin(85^0)}{a} = \frac{\sin(50^0)}{24}$ $a = \frac{\sin(85^0)(24)}{\sin(50^0)}$ $c = 31$ *Solve for* $\angle A$: $\angle A + \angle B + \angle C = 180^0$ $\angle A + 50^0 + 45^0 = 180^0$ $\angle A = 180^0 - 95^0$ $\angle A = 85^0$
E. *Discussing new concepts and practicing new skills #2*	The teacher presents and discusses another set of problem that applies law of sine. He/She lets the students to answer the given triangle on the board.  $\angle C = 41^0$ Solution: *Solve for* $\angle C$: $\frac{\sin B}{b} = \frac{\sin C}{c}$ $\frac{\sin 77^0}{9} = \frac{\sin C}{6}$ $\sin C = \frac{6(\sin 77^0)}{9}$ $\sin C = 0.6496$ $\angle C = \sin^{-1}(0.6496)$ *Solve for* $\angle A$: $\angle A + \angle B + \angle C = 180^0$ $\angle A + 77^0 + 41^0 = 180^0$ $\angle A = 180^0 - 118^0$ $\angle A = 62^0$ *Solve for side a:* $\frac{\sin B}{b} = \frac{\sin A}{a}$ $\frac{\sin 77^0}{9} = \frac{\sin 62^0}{a}$ $a = \frac{9(\sin 62^0)}{\sin 77^0}$ $a = 8.2$

F. Developing mastery (leads to formative assessment 3)	
G. Finding practical applications of concepts and skills in daily living	
H. Making generalizations and abstractions about the lesson	The teacher asks the following questions to the students: 1. What is the law of sine? 2. What data are required for solving oblique triangle using the law of sine? Answer: 1. The law of sine - sine of an angle of a triangle divided by its opposite side is equal to the sine of any other angle divided by its opposite side. 2. The data required for solving oblique triangle using the law of sine are: ● Two angles and one side (SAA Case & ASA Case) ● Two sides and an angle opposite one of these sides (SSA Case)
I. Evaluating Learning	In pairs, the teacher lets the students, find the unknown measurements of an oblique triangle using the law of sine.  Answer: $Solve\ for\ a$: $\frac{\sin A}{a} = \frac{\sin B}{b}$ $\frac{\sin 95^0}{a} = \frac{\sin 25^0}{5.5}$ $a = \frac{95^0)}{\sin 25^0}$ $a = 13$ $Solve\ for\ c$: $\frac{\sin B}{b} = \frac{\sin C}{c}$ $\frac{\sin 25^0}{5.5} = \frac{\sin 60^0}{c}$ $c = \frac{60^0)}{\sin 25^0}$ $a = 11$ $Solve\ for\ \angle C$: $\angle A + \angle B + \angle C = 180^0$ $95^0 + 25^0 + \angle C = 180^0$ $\angle C = 180^0 - 120^0$ $\angle C = 60^0$
J. Additional activities or remediation	The teacher instructs the students to bring their own scientific calculator for the next meeting.
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	

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