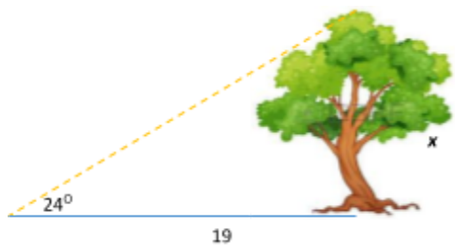
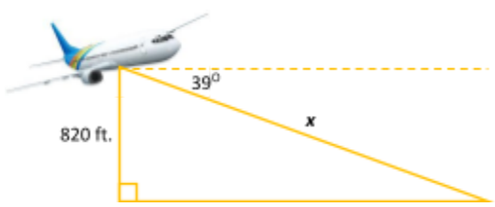
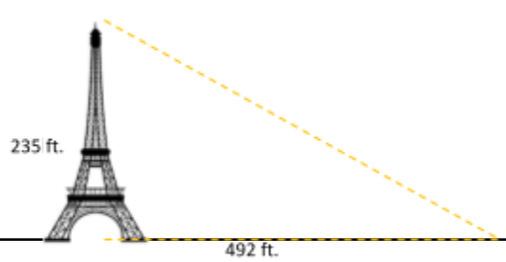
DAILY LESSON LOG OF M9GE–IVe–1 (DAY ONE)

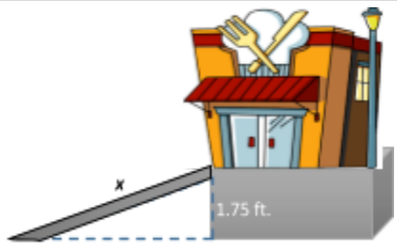
School		Grade Level	**9**
Teacher		Learning Area	**MATHEMATICS**
Teaching Date and Time		Quarter	**Fourth (4th)**

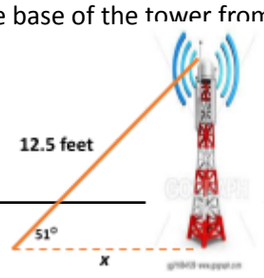
I. OBJECTIVES	*Objectives must be met over the week and connected to the curriculum standards. To meet the objectives, necessary procedures must be followed and if needed, additional lessons, exercises and remedial activities may be done for developing content knowledge and competencies. These are assessed 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.*
A. Content Standards	The learner demonstrates understanding of the basic concepts of trigonometry.
B. Performance Standards	The learner is able to apply the concepts of trigonometric ratios to formulate and solve real life problems with precision and accuracy.
C. Learning Competencies/ Objectives	Learning Competency: Use trigonometric ratios to solve real-life problems involving right triangles. (M9GE–IVe–1) 1. Identify the trigonometric ratios used to solve real-life situations or problems. 2. Solve for the measures of the unknown sides and angles of right triangle Use trigonometric ratios. 3. Shows interest in doing the tasks.
II. CONTENT	Solving Real-life Problems Using Trigonometric Ratios on a Right Triangles.
III. LEARNING RESOURCES	
A. References	
1. Teacher's Guide pages	Pages 292-297
2. Learner's Materials pages	Pages 460-464
3. Textbook pages	Empowering through Math by C. Dacanay pages 289-295 Grade 9 Mathematics by G. Nivera and M.R. Lapinid pages 449-460
4. Additional Materials from Learning Resource (LR) portal	
B. Other Learning Resources	Activity sheets for dependent learning and Worksheets for independent learning,
IV. PROCEDURES	*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.*
A. Review previous lesson or presenting the new lesson	• As a review, the teacher asks the students, in pairs, answer the following activity below: Give two trigonometric equations that could be used to solve for ***x*** in each figure. 1.  2.  3. 

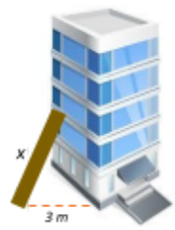
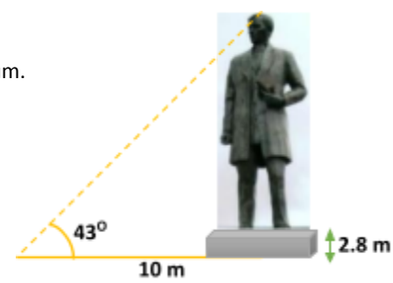
	Answer Key: 1. $tan\ 24^{o} = \frac{x}{19}\ and\ \cot cot\ 24^{o} = \frac{19}{x}$ 2. $\sin sin\ 39^{o} = \frac{820}{x}\ and\ \csc csc\ 39^{o} = \frac{x}{820}$ 3. $tan\ x^{o} = \frac{235}{492}\ and\ \cot cot\ x^{o} = \frac{492}{235}$
B. Establishing a purpose for the lesson	• Let the students realize that using the six trigonometric ratios is an important skill in solving a real-life problems.
C. Presenting examples/ instances of the new lesson	• The teacher lets the students, in groups of three, do the activity below: Illustrate and solve the following problem using the template below: A ramp from the ground level to the entrance of a restaurant is to be built. If the entrance is 1.75 feet above the ground level and the angle of inclination from the base of the ramp to the top is 18^{O}, find the length of the ramp.

Draw the diagram.	
What is/are given? What is to be determined?	
Formula used	
Solution	

Answer Key:

Draw the diagram.	
What is/are given? What is to be determined?	Given: 18^{O} = the angle of inclination from the base of the ramp to the top 1.75 feet = distance of the restaurant's entrance to the ground level. Unknown: X = the length of the ramp
Formula used	$\text{Sin } \theta = \frac{opposite}{hypotenuse}$
Solution	$\text{Sin } \theta = \frac{opposite}{hypotenuse}$ $\text{Sin } 18^{O} = \frac{1.75}{x}$ $x = \frac{1.75}{Sin\ 18^{O}}$ $x = \frac{1.75}{Sin\ 18^{O}}$ $x = 5.6631\ feet$

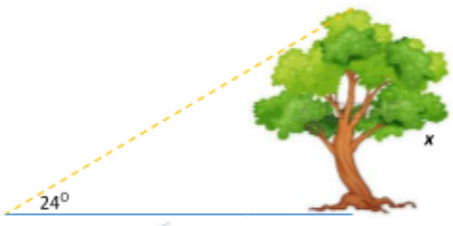
D. Discussing new concepts and practicing new skills #1	• The teacher discusses with the students the process of arriving at the answer of each item using the guide questions. Furthermore, the teacher asks the students about the mathematical skills or principles that they used in solving real-life problem involving right triangle.
E. Discussing new concepts and practicing new skills #2	• Working in pairs, the teacher provides another activity using the trigonometric ratios to solve real-life problem involving right triangle. Illustrate and solve the following problem below: 1. A guy-wire for a tower is 12.5 feet long and makes a 51^{O} angle with the ground. How far is the base of the tower from the stake anchoring the wire? Answer Key: $\theta = \frac{adjacent}{hypotenuse}$ 

	$\cos cos\ 51^O = \frac{x}{12.5}$ $51^O = x$ $= x$
F. Developing mastery (leads to formative assessment 3)	• The teacher gives another activity for the students to perform individually. This will allow the students to demonstrate learning. Read, analyze, illustrate and solve the problem below. Show your solution. 1. A ladder is leaning on the wall of a building makes an angle 60^O from the ground. If the distance of the foot of a ladder to the base of a building is 3 m. How long is the ladder leaning on the wall? Answer Key: $\theta = \frac{adjacent}{hypotenuse}$ $60^O = \frac{3}{x}$ $= \frac{3}{cos\ 60^O}$ $= 6$  Therefore, the length of the ladder leaning on the wall of a building is 6 meters.
G. Finding practical applications of concepts and skills in daily living	
H. Making generalizations and abstractions about the lesson	• The teacher summarizes the mathematical skills or principles used to solve real-life problem involving right triangle asking the question below: 1. What mathematical principles or skills did you use in solving the distance or length of an object and the angle formed from the two given objects? By using the six trigonometric ratios. • Answers must be drawn from the students.
I. Evaluating Learning	• The teacher lets the students answer individually the formative assessment. Read, analyze, illustrate and solve the problem below. Show your solution. Problem: 1. A Jose Rizal statue stands on a 2.8m high podium. At a point 10m away from the base of the podium makes an angle 43^O to the top of the statue. How high is the statue? Answer Key: Let ***x*** be the total length of the statue and the podium. $\theta = \frac{oposite}{adjacent}$ $43^O = \frac{x}{10}$ $43^O) = x$ $9.3 = x$  So, The length of the statue + the podium = 9.3 m The length of the statue + 2.8 = 9.3 The length of the statue = 9.3 - 2.8 The length of the statue = 6.5
1. Additional activities or remediation	
V. REMARKS	
VI. REFLECTION	*Reflect on your teaching and assess yourself as a teacher. Think about your students' progress. What works? What else needs to be done to help the pupils/students learn? Identify what help your instructional supervisors can provide for you so when you meet them, you can ask them relevant questions.*
A. No. of learners who earned 80% of the evaluation	

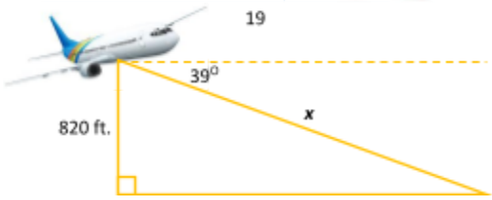
B.	No. of learners who require additional activities for remediation who scored below 80%	
C.	Did the remedial lesson work? No. of learners who have caught up with the lesson.	
D.	No. of learners who continue to require remediation	
E.	Which of my teaching strategies worked well? Why did these work?	
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	

Give two trigonometric equations that could be used to solve for ***x*** in each figure.

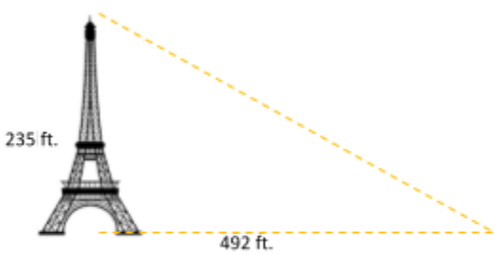
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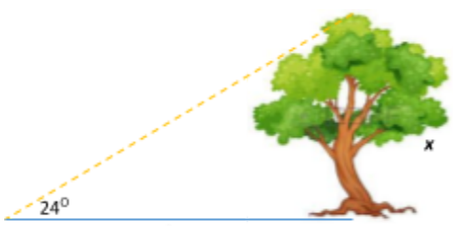


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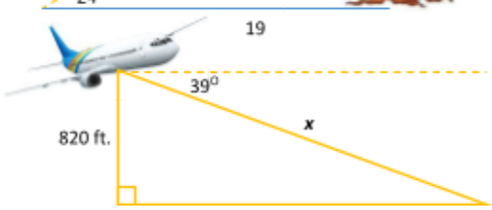


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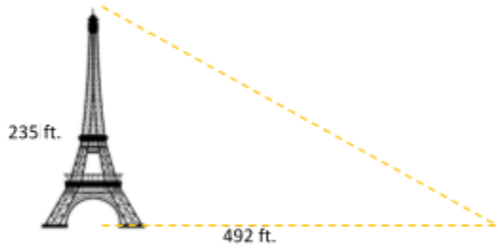
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