DAILY LESSON LOG OF M9GE-IVf-g1 (Day 5)

| School | | Grade Level | Grade 9 |
|---|---|--|--|
| Teacher | | Learning Area | Mathematics |
| Teaching Date and Time | | Quarter | Fourth |
| I. OBJECTIVES | | | |
| 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: Illustrates laws of sines and cosines. (M9GE-IVf-g1) Learning Objectives: 1. Derive the Law of Cosine. 2. State the Law of Cosine. 3. Internalize the value of concern for other in accomplishing the day's task. | | |
| II. CONTENT | Law of Cosine | | |
| III. LEARNING RESOURCES | 2011 01 0001110 | | |
| A. References | | | |
| 1. Teacher's Guide | | | |
| 2. Learner's Materials | Page 497- 505 | | |
| 3. Textbook pages | Patterns and Practicalities page 446 | | |
| Additional Materials from Learning Resource (LR) portal B. Other Learning Resources | | | |
| IV. PROCEDURES | - | | |
| A. Review previous lesson or presenting the new lesson | The teacher will recall to the student the following situations. 1. Two angles and one side (SA 2. Two sides and an angle opportunity) | A Case & ASA Case) | |
| B. Establishing a purpose for the lesson | The teacher tells the students that using the Law of Cosines. | oblique triangles ca | an also be solved |
| C. Presenting examples/ instances of the new lesson | The teacher discusses with the students the Law of Cosine. This law states the following: "The square of the length of one side is equal to the sum of the squares of the other two sides minus the product of twice the two sides and the cosine of the angle between them." | | |
| D. Discussing new concepts and practicing new skills #1 | The teacher will tell the students: "relates the sides and angles of a triangle by the sides and angles of a triangle by the sides and angles of a triangle by the sides are considered by the sides and angles of a triangle and considered by the sides and angles of a triangle and considered by the sides and angles of a triangle and considered by the sides and angles of a triangle and considered by the sides and angles of a triangle and considered by the sides and angles of a triangle and considered by the sides and angles of a triangle and considered by the sides are considered by the | The cosine law any triangle AB $a^2 = b^2 + c^2$ $b^2 = a^2 + c^2$ $c^2 = a^2 + b^2$ as shown in the figu | states that for C, - 2bc cosA - 2ac cosB - 2ab cosC |

| | | $b2 = x^2 + h^2$ | |
|----|---|---|--|
| | | therefore, substituting in (1), we have | |
| | | $a^2 = c^2 - 2cx + b^2$ (2). Also, in triangle ADC, | |
| | | Cos $A = \frac{x}{h}$ | |
| | | So, $x = b \cos A$. Substituting is (2), we have, | |
| | | $a^2 = b^2 + c^2 - 2bc \cos A$.= | |
| | | The proof above can also be used to derive the other two equations. | |
| E. | Discussing new concepts and practicing new skills # 2 | | |
| F. | Developing mastery (Leads to formative assessment3) | The teacher will let the students answer the comprehension check. | |
| | | Write TRUE if the statement is true. If the statement is false, change the underlined word or phrase to make it true. | |
| | | 1. In any $\triangle ABC$, $c^2 = a^2 + b^2$ 2. The Law of Cosines can be used to find an unknown side length | |
| | | or angle measure. | |
| | | 3. The <u>direction</u> of a vector is called its magnitude. | |
| | | 4. The Law of Cosines can be used to solve any triangle given two sides and <u>an angle.</u> | |
| | | Since and an angle: | |
| | | Answer Key: | |
| | | 1. $c^2 = a^2 + b^2 - 2ab \cos cos C$ 2. true | |
| | | 2. true3. length | |
| | | 4. The included angle | |
| G. | Finding practical applications of | | |
| | concepts and skills in daily living | | |
| H. | Making generalizations and | The teacher summarizes the mathematical skills or principles used in the | |
| | abstractions about the lesson | Law of Cosine through a question like: 1. When can we use the law of cosine? | |
| | | 1. When can we use the law of cosme! | |
| | | Possible Answer: | |
| | | We can use the law of cosine when "two sides and the included angle are known" and "three sides are known" | |
| I. | Evaluating Learning | angle are known" and "three sides are known". The teacher lets the students answer individually the formative | |
| | | assessment. | |
| | | Follow the steps and use the Law of Cosines to find the length of side a in | |
| | | $\triangle ABC$, if $m \angle A = 70^{\circ}$, $b = 24$, and $c = 15$. | |
| | | 1. Write the Law of Cosines so that a^2 is isolated. | |
| | | 2. Substitute the given values. | |
| | | 3. Simplify the resulting expression. Compute for <i>a</i> by taking the positive square root. | |
| | | Answer Kov | |
| | | Answer Key: 1. $a^2 = b^2 + c^2 - 2bc \cos cos A$ | |
| | | 1. $a - b + c - 2bc \cos cos A$ 2. $a^2 = 24^2 + 15^2 - 2(24)(15) \cos cos 70^\circ$ | |
| | | 3. $a = \sqrt{576 + 225 - 720 \cos \cos 70^{\circ}}$ | |
| | | $a = 23.55 \approx 24$ | |
| J. | Additional activities or | | |
| | remediation | | |
| | V. REMARKS VI. REFLECTION | | |
| Α. | No. of learners who earned | | |
| Ľ. | 80% of the evaluation | | |
| В. | No. of learners who require | | |
| | additional activities for | | |

| | remediation who scored below 80% | |
|----|---|--|
| C. | Did the remediation lesson work? No. of learners who have caught up with the lesson. | |
| D. | No. of learner 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 of localized materials did I wish to share with other reachers. | |

Prepared by:

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