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|  | **DAILY LESSON LOG**  **GRADES 7 TO 12** | **School** | Tuao High School | **Grade Level** | 8 |
| **Teacher** | Carl Hendrick O. Rabut | **Learning Area** | Mathematics- Statistics and Probability |
| **Time** |  | **Quarter** | IV |

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| 1. **OBJECTIVES** |  |
| A. Content Standards | The learner demonstrates understanding of key concepts of inequalities in a triangle, and parallel and perpendicular lines. |
| B. Performance Standards | The learner is able to communicate mathematical thinking with coherence and clarity in formulating, investigating, analyzing, and solving real- life problems involving triangle inequalities, and parallelism and perpendicularity of lines using appropriate and accurate representations |
| 1. Learning Competencies / Objective | The learner applies Theorems on Triangle Inequalities **M8GE-IVb-1**  **At the end of the session, the students should have**  - recalled the definition of the exterior angle of a triangle and its corresponding remote interior angles.  -applied the exterior angle theorem to solve problems involving missing angles of triangles.  - appreciated the usefulness of the exterior angle theorem in real-world situations and geometry proofs. |
| **II. CONTENT** | **Applying Triangle Inequality Theorems** |
| **III. LEARNING RESOURCES** |  |
| A. References |  |
| 1. Teacher’s Guide Pages |  |
| 2. Learner’s Materials Pages |  |
| 3. Textbook Pages |  |
| 1. Additional Materials from   Learning Resources (LR) Portal | *K to 12 Curriculum Guide MATHEMATICS (Grade 1 to Grade 10)*. Department of Education, 2016.  *“Curriculum Implementation and Learning Management Matrix.”* Department of Education, 2020. |
| B. Learning Resources |  |

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| **IV. PROCEDURES** | **Session 1** | **Session 2** | **Session 3** | **Session 4** |
| A. Reviewing previous lesson or presenting the new lesson | Start by reviewing the concept of the exterior angle inequality theorem with an activity “Name me” where you will show a triangle with three extended sides forming three exterior angles and the task is for the students to name the angles and their relative remote angles.  Write the definition of the exterior angle of a triangle and its corresponding remote interior angles on the board or on a slide.  Explain that the exterior angle theorem states that the measure of an exterior angle of a triangle is equal to the sum of the measures of its two remote interior angles. |  |  | Review the definitions and formulas of the three theorems on triangle inequalities: exterior angle theorem, triangle inequality theorem (sides), and hinge theorem.  Ask the students to recall some examples of applying each theorem to a given figure or problem. |
| B. Establishing a purpose for the lesson | Tell the students that in this lesson, they will learn how to use the exterior angle theorem to find missing angles of triangles given some measurements.  Tell them that they will also learn how this theorem can help them solve problems in geometry and in real life. |  |  | Explain that the purpose of the quiz is to assess their understanding and mastery of these theorems and how they can help them solve problems involving triangles. |
| C. Presenting examples/instances of the new lesson | Start with an activity called “Compare me” where they will be shown a triangle on the screen and compare the remote angles to the exterior angle and the sum of the remote interior angles. |  |  | Show some sample questions from the quiz that cover each objective and ask the students to try to answer them.  Discuss the correct answers and solutions with the class and clarify any doubts or misconceptions. |
| D. Discussing new concepts and practicing new skills in #1 | Show some examples of how to use the exterior angle theorem to find missing angles of triangles, such as:  Example 1: Find x.  Solution: Using the exterior angle theorem, we have:  x = 110° + 40°  x = 150°  Example 2: Find y.  Solution: Using the exterior angle theorem, we have:  y + 35° = 120°  y = 120° - 35°  y = 85° |  |  |  |
| E. Discussing new concepts and practicing new skills in #2 | Ask “What if” questions where they will be given some measurements for the triangle, such as:  What if we know that one of the remote interior angles is 60° and the exterior angle is 140°? What is the measure of the other remote interior angle?  Solution: Using the exterior angle theorem, we have:  60° + x = 140°  x = 140° - 60°  x = 80°  What if we know that one of the remote interior angles is 45° and the other one is x? What is the measure of the exterior angle?  Solution: Using the exterior angle theorem, we have:  45° + x = y  y = 45° + x |  |  |  |
| Developing mastery | Tell them that they will be given another triangle with some measurements and they will have to compare and solve for the missing parts. Have them work by three.  Roam around the class and check their work. Provide feedback and guidance as needed. |  |  |  |
| G. Finding practical application of concepts and skills in daily living | Ask them what they think are some practical uses of this theorem in real life. Include a part where you will add on what they say on practical uses, such as:  Some possible answers are:  Architects use this theorem to design buildings and structures that are stable and aesthetically pleasing.  Engineers use this theorem to calculate forces and stresses on bridges and other constructions that involve triangles.  Artists use this theorem to create perspective and depth in their paintings and drawings.  Navigators use this theorem to determine their position and direction using maps and compasses. |  |  |  |
| H. Making generalizations and abstractions about the lesson | Have them summarize what they learned in this lesson by writing down or saying out loud:  Some possible summaries are:  *In this lesson, we learned about the exterior angle theorem which states that an exterior angle of a triangle is equal to the sum of its two remote interior angles.*  *We also learned how to use this theorem to find missing angles of triangles given some measurements.*  *We also learned how this theorem can help us solve problems in geometry and in real life.* |  |  | Summarize the main points and key concepts of these theorems and how they can be used to solve problems involving triangles. |
| I. Evaluating learning | Give them a new triangle. Do a same activity like part F but now individually. |  |  | Have a quiz that assesses the students’ ability to match the correct definition of each theorem to a given term, apply any of the three theorems to a given figure, and analyze how changing one angle or side length affects the other angles or side lengths in a triangle using any of the three theorems. |
| J. Additional activities for application or remediation |  |  |  | For students who need more practice or challenge, provide them with additional worksheets or online resources that offer more problems or activities related to these theorems.  For students who need more clarification or support, review with them the definitions and formulas of these theorems and provide them with more examples and explanations. |
| Closing |  |  |  | Thank the students for their participation and effort.  Remind them of their homework or assignments related to this topic.  Preview what they will learn next time. |

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| **V. REMARKS** |  |  |  |  |
| INTEGRATION  (Values, Thrusts, Program Activities & Projects) |  |  |  |  |
| **VI. REFLECTION** |  |  |  |  |
| A. No. of learners who earned 80% in the evaluation |  |  |  |  |
| B. No. of learners who require additional activities for remediation whose scored below 80% |  |  |  |  |
| C. Did the remedial lessons 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 localization materials did I used/discover which I wish to share with other teachers? |  |  |  |  |

Prepared by: Checked by:

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Student-Teacher Cooperating Teacher