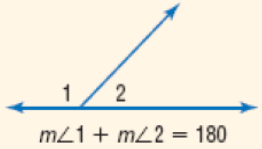
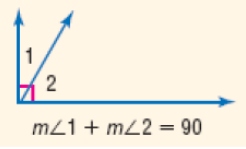
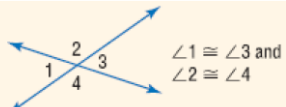


DAILY LESSON LOG OF M8GE-IIIa-c-1 (Week Three-Day Three)

School		Grade Level	Grade 8
Teacher		Learning Area	Mathematics
Teaching Date and Time		Quarter	Third
I. OBJECTIVES	<i>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.</i>		
A. Content Standards	The learner demonstrates understanding of key concepts of axiomatic structure of geometry and triangle congruence.		
B. Performance Standards	The learner is able to formulate an organized plan to handle a real-life situation.		
C. Learning Competencies/ Objectives	Learning Competency: Illustrates the need for an axiomatic structure of a mathematical system in general, and in Geometry in particular: (a) defined terms; (b) undefined terms; (c) postulates; and (d) <u>theorems</u> (M8GE-IIIa-c-1) Learning Objectives: 1. Define theorem 2. illustrate the need for an axiomatic structure of a mathematical system in general, and in Geometry in particular: theorems 3. Accept the fact that an axiomatic structure is necessary for a deeper understanding of mathematical system and in geometry		
II. CONTENT	Axiomatic structure- Theorem		
III. LEARNING RESOURCES			
A. References			
1. Teacher's Guide	N/A		
2. Learner's Materials	N/A		
3. Textbook pages	N/A		
4. Additional Materials from Learning Resource (LR) portal			
B. Other Learning Resources	Math70Lecture-1-2-1-3_Symboland Postulates.pdf https://www.mathsisfun.com/algebra/theorems-lemmas.html file:///C:/Users/leahgail/Desktop/glenco%20-%20Postulates-and-Theorems-with-examples-glenco.1kcs9sj.pdf		

IV. PROCEDURES	<i>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.</i>
A. Review previous lesson or presenting the new lesson	The teacher lets the students answer the question: Which comes first, Chicken or Egg? Prove your answer in a way that your classmate will believe in you. Possible responses: - Chicken because as God created the world He have made first the animals not eggs - Egg because chicken comes from egg. Then the teacher will tell to the students that statements that are logically proven are called theorems. This is the fourth part of the axiomatic structure
B. Establishing a purpose for the lesson	The teacher lets the students accept the fact that finding the concept of theorem is necessary for a deeper understanding of mathematical system and in geometry
C. Presenting examples/ instances of the new lesson	The teacher lets the students, observe the figure drawn or posted by the teacher.  If M is the midpoint of $\overline{AB}$, would you agree that $\overline{AM} \cong \overline{MB}$? How will you prove that they are congruent? Possible responses: Yes, according to Segment Addition Postulate $\overline{AM} + \overline{MB} = \overline{AB}$, then I can say that $\overline{AM} \cong \overline{MB}$ Yes, according to the definition of midpoint of a line it is halfway between two endpoints.
D. Discussing new concepts and practicing new skills #1	The teacher discusses with the students the process of arriving at the correct answer. Furthermore, he/she ask the students about the mathematical skills or principles that they used to arrive at their answers. The teacher introduces now the definition of theorems together with corollary and lemma. Theorem- a statement proven based on axioms, other theorems, and some set of logical connectives; a statement that follows logically from the previous definitions and principles; a statement that can be proved to be true ;major result Corollary- a theorem that follows from another theorem as a “by-product”; a theorem that is easily proved as the consequence of another theorem ;follows on

	Lemma- a theorem that is introduced and proved so that a later theorem can be proved; helping theorem; small results (See last page for the example of a theorem with lemma and corollary)						
E. Discussing new concepts and practicing new skills #2	The teacher discusses and illustrates thoroughly some of the basic theorems used in geometry. Emphasize that Theorems always have a proof. Midpoint Theorem If M is the midpoint of $\overline{AB}$, then $\overline{AM} \cong \overline{MB}$.  Supplement Theorem If two angles form a linear pair, then they are supplementary angles.  $m\angle 1 + m\angle 2 = 180$ Complement Theorem If the noncommon sides of two adjacent angles form a right angle, then the angles are complementary angles.  $m\angle 1 + m\angle 2 = 90$ Theorem 2.8 Vertical Angle Theorem If two angles are vertical angles, then they are congruent. Abbreviation: Vert. $\angle$s are $\cong$.  $\angle 1 \cong \angle 3$ and $\angle 2 \cong \angle 4$						
F. Developing mastery (leads to formative assessment 3)	The teacher lets the students do what is asked. Complete the table by identifying the theorems being stated. The possible answers are written inside the box. Vertical Angle Theorem Angle Sum Theorem Midpoint Theorem Exterior Angle Theorem Supplement Theorem Complement Theorem Isosceles Triangle Theorem <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">THEOREMS</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;">1.</td> <td>If M is the midpoint of $\overline{AB}$, then $\overline{AM} \cong \overline{MB}$.</td> </tr> <tr> <td>2.</td> <td>If two angles are vertical angles, then they are congruent.</td> </tr> </tbody> </table>	THEOREMS		1.	If M is the midpoint of $\overline{AB}$, then $\overline{AM} \cong \overline{MB}$.	2.	If two angles are vertical angles, then they are congruent.
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1.	If M is the midpoint of $\overline{AB}$, then $\overline{AM} \cong \overline{MB}$.						
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	3.	If two angles form a linear pair, then they are supplementary angles																
	4.	If two none common sides of two adjacent angles from a right angle, then the angles are complementary angles.																
G. Finding practical applications of concepts and skills in daily living																		
H. Making generalizations and abstractions about the lesson	The teacher summarizes the lesson by asking the students the following question: What is theorem? What theorems you have learned today?																	
I. Evaluating Learning	The teacher lets the students answer individually the formative assessment. Illustrate the following theorems.																	
	<table><tr><td>THEOREMS:</td><td>ILLUSTRATIONS:</td></tr><tr><td>Midpoint Theorem</td><td></td></tr><tr><td></td><td></td></tr><tr><td>Vertical Angle Theorem</td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td>Supplement Theorem</td><td></td></tr><tr><td>Complement Theorem</td><td></td></tr></table>		THEOREMS:	ILLUSTRATIONS:	Midpoint Theorem				Vertical Angle Theorem						Supplement Theorem		Complement Theorem	
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J. 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	

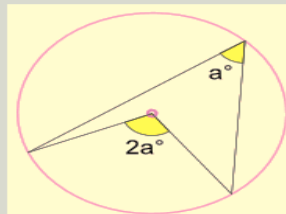
Prepared by:

ABIGAIL Y. MUÑOZ

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Example: A Theorem, a Corollary to it, and also a Lemma!

Theorem

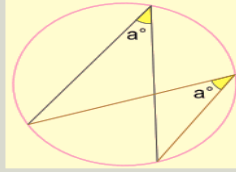


An inscribed angle a° is half of the central angle $2a^\circ$
 Called the **Angle at the Center Theorem**.

Corollary

(This is called the "*Angles Subtended by the Same Arc Theorem*", but it's really just a **Corollary** of the "*Angle at the Center Theorem*")

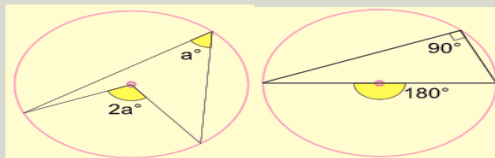
Keeping the endpoints fixed ... the angle a° is always the same, no matter where it is on the circumference:



So, Angles Subtended by the Same Arc are equal.

Lemma

(This is sometimes called the "*Angle in the Semicircle Theorem*", but it's really just a **Lemma** to the "*Angle at the Center Theorem*")



In the special case where the central angle forms a diameter of the circle:

$$2a^\circ = 180^\circ, \text{ so } a^\circ = 90^\circ$$

So an angle inscribed in a semicircle is always a right angle.

(That was a "small" result, so it is a Lemma.)

<https://www.mathsisfun.com/algebra/theorems-lemmas.html>