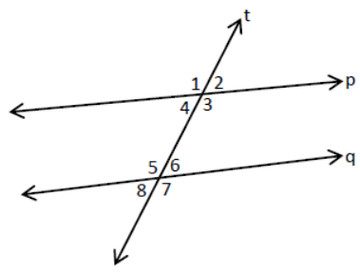
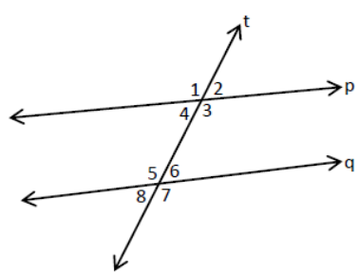
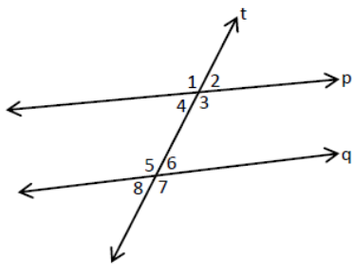
Daily Lesson Log of M8GE-Ive-1 (Week-Four-Day Two)

School		**Grade Level**	8
Teacher		**Learning Area**	Mathematics
Teaching Date and Time		**Quarter**	Fourth

I. OBJECTIVES	
A. Content Standards	Demonstrates understanding of key concepts of inequalities in a triangle, and parallel and perpendicular lines.
B. Performance Standards	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.
C. Learning Competencies/Objectives	Learning Competency: Proves properties of parallel lines cut by a transversal. **(M8GE-Ive-1)** Learning Objectives: 1. Recall on the different angles formed by parallel lines cut by a transversal. 2. Prove properties of parallel lines cut by a transversal (Alternate Interior Angles and Alternate Exterior Angles Theorem). 3. Demonstrate appreciation on knowing the different angles formed by parallel lines cut by a transversal as important in proving properties of parallel lines cut by a transversal.
II. CONTENT	Proving Properties of Parallel Lines Cut by a Transversal
III. LEARNING RESOURCES	
A. References	
1. Teacher's Guide pages	
2. Learner's Materials pages	Pages 443-454
3. Textbook pages	
4. Additional Materials from Learning Resource (LR) portal	
B. Other Learning Resources	
IV. PROCEDURES	
A. Review previous lesson or presenting the new lesson	The teacher asks the students: " What are the different angles formed by parallel lines cut by a transversal? " Possible Answers: Corresponding angles, alternate exterior angles, alternate interior angles, same-side exterior angles, same-side interior angles
B. Establishing a purpose for the lesson	The teacher lets the students realize that knowing the different angles formed by parallel lines cut by a transversal is important in proving properties of parallel lines cut by a transversal.
C. Presenting examples/ instances of the new lesson	The teacher will present two parallel lines cut by a transversal and let the students answer the guide questions below.  Guide Questions: 1. From the figure, what do you call $\angle 1$ and $\angle 5$? 2. What can you say about the measures of $\angle 1$ and $\angle 5$? 3. From the figure, what do you call $\angle 4$ and $\angle 6$?

	4. What can you say about the measures of $\angle 4$ and $\angle 6$? 5. From the figure, what do you call $\angle 4$ and $\angle 6$? 6. What can you say about the measures of $\angle 1$ and $\angle 7$?
D. Discussing new concepts and practicing new skills #1	The teacher discusses with the students the answer to each item in the guide questions and present the corresponding angles postulate, alternate interior angles theorem, and alternate exterior angles theorem. **Corresponding Angles Postulate** If two parallel lines are cut by a transversal, then the pairs of corresponding angles are congruent. **Alternate Interior Angles Theorem** If two parallel lines are cut by a transversal, then the pairs of alternate interior angles are congruent. **Alternate Exterior Angles Theorem** If two parallel lines are cut by a transversal, then the pairs of alternate exterior angles are congruent.
E. Discussing new concepts and practicing new skills #2	The teacher will present and discuss the proof of Alternate Interior Angle and the Alternate Exterior Angles Theorem. **Alternate Interior Angles Theorem** If two parallel lines are cut by a transversal, then the pairs of alternate interior angles are congruent. Given: $p \parallel q$ Prove: $\angle 4 \cong \angle 6$  Proof: **Statements** / **Reasons** 1. p||q — 1. Given 2. <4 ≅ <8 — 2. Corresponding Angles Postulate 3. <8 ≅ <6 — 3. Vertical Angle Theorem 4. <4 ≅ <6 — 4. Transitive Property of Congruence **Alternate Exterior Angles Theorem** If two parallel lines are cut by a transversal, then the pairs of alternate exterior angles are congruent. Given: $p \parallel q$ Prove: $\angle 1 \cong \angle 7$



Proof:

Statements	Reasons
1. p||q	1. Given
2. <1≅<5	2. Corresponding Angles Postulate
3. <5≅<7	3. Vertical Angle Theorem
4. <1≅<7	4. Transitive Property of Congruence

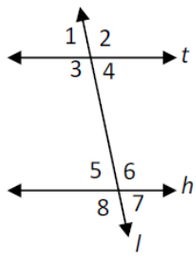
F. Developing mastery (leads to formative assessment 3)

The teacher will let the students work in pairs to do the task presented below.
Directions: Fill-in the missing statement or reason in the given proof.

1. Given: $t \parallel h$

Prove: $\angle 3 \cong \angle 6$

Statement	Reason
1. $t \parallel h$	Given
2. $\angle 3 \cong \angle 8$	Corresponding $\angle s$ post.
3. $\angle 8 \cong \angle 6$	
4. $\angle 3 \cong \angle 6$	



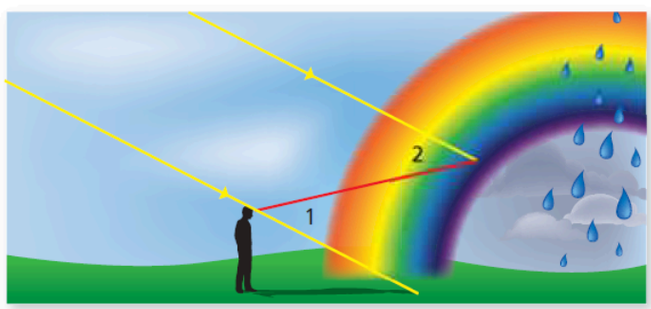
Answer:

Statements	Reasons
1.	1.
2.	2.
3.	3. Vertical Angle Theorem
4.	4. Transitive Property of Congruence

G. Finding practical applications of concepts and skills in daily living

The teacher will present this real-life situation and lets the students brainstorm and give their own reasoning.

RAINBOW A rainbow is formed when sunlight reflects off raindrops at different angles. For blue light, the measure of $\angle 2$ is 40°. What is the measure of $\angle 1$?

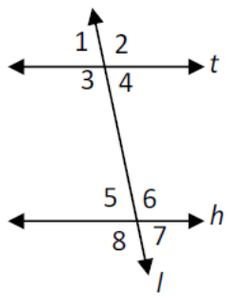


H. Making generalizations and abstractions about the lesson

The teacher summarizes the mathematical skills used to prove properties of parallel lines cut by a transversal by asking questions like:

1. What did you do to prove properties of parallel lines cut by a transversal ?
2. How did you made sure that the proof is correct?

Possible Answers:

	1. Set up a two-column proof, write down the given, put additional information derived from the given, support every statement with the correct theorem, postulate, or property and order the proof logically 2. Recalled on the different properties, definition, and theorems that can be used to justify statements and check the order of the proof
I. Evaluating Learning	The teacher lets the students answer individually the formative assessment. Directions: Fill-in the missing statement or reason in the given proof. Choose your answer on the box. Given $\angle 2 \cong \angle 6$ Corresponding Angles Postulate Vertical Angle Theorem Transitive Property of Congruence  Given: $t \parallel h$ Prove: $\measuredangle 2 \cong \measuredangle 8$ Proof:

Statements	Reasons
1. $t \parallel h$	1.
2.	2. Corresponding Angles Postulate
3. $\angle 8 \cong \angle 6$	3.
4. $\angle 2 \cong \angle 8$	4.

Answer:

Statements	Reasons
1. $t \parallel h$	1. Given
2. $\angle 2 \cong \angle 6$	2. Corresponding Angles Postulate
3. $\angle 8 \cong \angle 6$	3. Vertical Angle Theorem
4. $\angle 2 \cong \angle 8$	4. Transitive Property of Congruence

J. Additional activities or remediation	
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	The teacher contextualized and localized the topic in finding practical application part of the DLL.