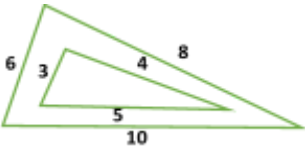
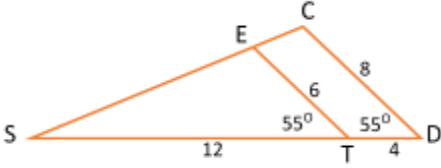
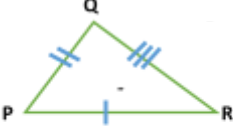
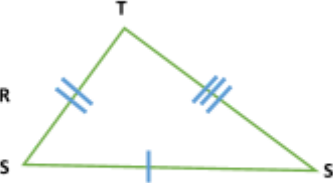
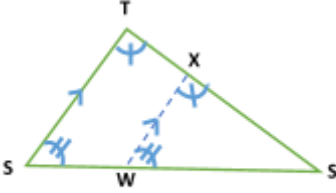
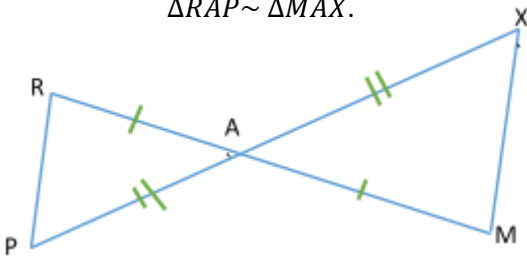


DAILY LESSON LOG OF M9GE-III-h-1 (DAY TWO)

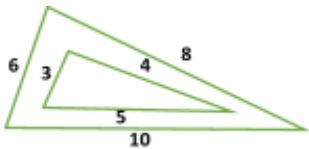
School		Grade Level	Grade 9
Teacher		Learning Area	Mathematics
Teaching Date and Time		Quarter	Third
I. OBJECTIVES	Objectives must be met over the week and connected to the curriculum standards. To meet the objectives, necessary procedures must be followed and if needed, additional lessons, exercises 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 key concepts of parallelograms and triangle similarity.		
B. Performance Standards	The learner is able to investigate, analyze, and solve problems involving parallelograms and triangle similarity through appropriate and accurate representation.		
C. Learning Competencies/ Objectives	Learning Competency: Proves the conditions for similarity of triangles by SAS similarity Theorem. (M9GE-III-h-1) 1. Identify the corresponding sides and corresponding included angle. 2. Prove the conditions for similarity of triangles using the SAS similarity theorem. 3. Shows interest in doing the tasks.		
II. CONTENT	Proves the Conditions for Similarity of Triangles by SAS Similarity Theorem		
III. LEARNING RESOURCES			
A. References			
1. Teacher’s Guide pages	Pages 245-248		
2. Learner’s Materials pages	Pages 371-373		
3. Textbook pages	e-math by O. Oronce and M. Mendoza pages 302-317 Next Generation pages 313-319		
4. Additional Materials from Learning Resource (LR) portal			
B. Other Learning Resources	Activity Sheets for Dependent Learning and Worksheet 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: Tell whether the following pair of triangles is similar or not. If similar, write the similarity postulate or theorem that proves their similarity and give the scale factor.  Answer Key: It is a similar triangle by SSS similarity theorem since $\frac{6}{3} = \frac{8}{4} = \frac{10}{5}$. It shows that the ratio between corresponding sides are proportional.		
B. Establishing a purpose for the lesson	The teacher lets the students realize that proving the conditions for similarity of triangles is important skill in understanding each similarity theorems.		
C. Presenting examples/	The teacher lets the students, in groups of three, do the activity below:		

instances of the new lesson	Using the figure below, answer the following:  - Which of the following proportions is correct? A. $\frac{SD}{ST} = \frac{CD}{ET}$ B. $\frac{CD}{ET} = \frac{TS}{SD}$ C. $\frac{SD}{TS} = \frac{SE}{SC}$ D. $\frac{ET}{CD} = \frac{SC}{SE}$ - Which of the angle in ΔEST congruent to $\angle D$ of ΔCSD? A. $\angle E$ B. $\angle S$ C. $\angle T$ D. $\angle C$ - Which side corresponds to $\overline{SD}$ of ΔCSD in ΔEST? A. $\overline{ES}$ B. $\overline{ST}$ C. $\overline{TE}$ D. $\overline{DC}$ - What the ratio of similarity if the two triangles are congruent? A. $\frac{2}{3}$ B. $\frac{3}{2}$ C. $\frac{3}{4}$ D. $\frac{3}{5}$ - Which of the following notation best described the two similar triangle? A. $\Delta EST \sim \Delta CDS$ B. $\Delta ETS \sim \Delta CSD$ C. $\Delta SET \sim \Delta SDC$ D. $\Delta STE \sim \Delta SDC$ Answer Key: A. $\frac{SD}{ST} = \frac{CD}{ET}$ C. $\angle T$ B. $\overline{ST}$ C. $\frac{3}{4}$ D. $\Delta STE \sim \Delta SDC$
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 proving the conditions for similarity of triangles using the SAS similarity theorem.
E. Discussing new concepts and practicing new skills #2	- Working in pairs, the teacher gives another activity for the students to perform. This will allow the students to demonstrate learning. Activity 10 SAS Similarity Theorem and Its Proof Write the statements or reasons that are left blank in the proof of SAS Similarity Theorem. Refer to the hints provided to help you.   Given: $\frac{QR}{TU} = \frac{PR}{SU}; \angle R \cong \angle U$ Prove: $\Delta PQR \sim \Delta STU$ Proof: - Construct X on $\overline{TU}$ such that $\overline{XU} \cong \overline{QR}$. - From X, construct $\overline{XW}$ parallel to $\overline{TS}$ intersecting $\overline{SU}$ at W. 

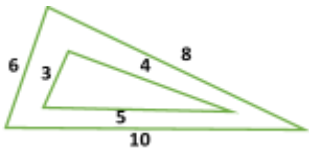
	$\frac{QR}{TU} = \frac{PR}{SU}$ (statement 6), then		
9	Multiply the proportions in statement 8 by their common denominators and simplify.	$\overline{PR} = \overline{WU}$ $\overline{QR} = \overline{XU}$	Multiplication Property of Equality
10	Write the given related to corresponding angles.	$\angle R \cong \angle U$	Given
11	What can you say about triangles PQR and WXU based on statements 9 and 10.	$\Delta PQR \cong \Delta WXU$	_____ Triangle Congruence Postulate
12	Write statement when the reason is the one shown.	$\Delta PQR \sim \Delta WXU$	Congruent triangles are similar.
13	Write a conclusion using statements 12 and 3.	$\Delta PQR \sim \Delta STU$	Substitution Property

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 prove conditions for similar triangles by SAS similarity theorem by asking the following question like: - How does the ratio of the corresponding sides of two similar triangles related in SAS similarity theorem? How about the corresponding included angle? The two sides of one triangle are proportional to the corresponding two sides of another triangle and their respective included angles are congruent. - Answers can be drawn from the students.																
I. Evaluating Learning	The teacher lets the students answer individually the formative assessment. Given the figure below, use the SAS Similarity Theorem to prove that $\Delta RAP \sim \Delta MAX$.  <table><thead><tr><th></th><th>Hint</th><th>Statement</th><th>Reason</th></tr></thead><tbody><tr><td>1</td><td>Write in a proportion the ratios of two corresponding proportional sides.</td><td></td><td></td></tr><tr><td>2</td><td>Describe included angles of the proportional sides.</td><td></td><td></td></tr><tr><td>3</td><td>Conclusion based on the simplified ratios.</td><td></td><td></td></tr></tbody></table>		Hint	Statement	Reason	1	Write in a proportion the ratios of two corresponding proportional sides.			2	Describe included angles of the proportional sides.			3	Conclusion based on the simplified ratios.		
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2	Describe included angles of the proportional sides.																
3	Conclusion based on the simplified ratios.																
1. Additional activities or remediation																	
V. REMARKS																	
VI. REFLECTION	<i>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.</i>																
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																	

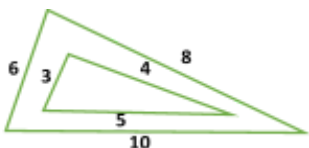
Tell whether the following pair of triangles is similar or not. If similar, write the similarity postulate or theorem that proves their similarity and give the scale factor.



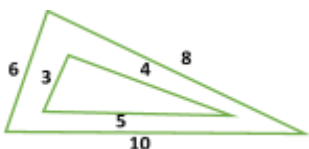
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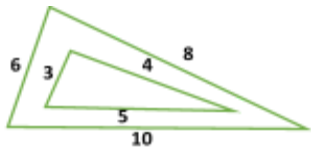
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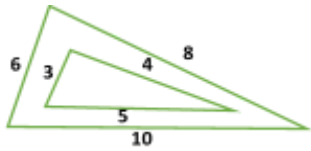
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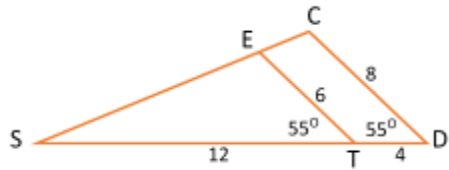
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Using the figure below, answer the following:



- Which of the following proportions is correct?

A. $\frac{SD}{ST} = \frac{CD}{ET}$

B. $\frac{CD}{ET} = \frac{TS}{SD}$

C. $\frac{SD}{TS} = \frac{SE}{SC}$

D. $\frac{ET}{CD} = \frac{SC}{SE}$
- Which of the angle in $\triangle EST$ congruent to $\angle D$ of $\triangle CSD$?

A. $\angle E$

B. $\angle S$

C. $\angle T$

D. $\angle C$
- Which side corresponds to $\overline{SD}$ of $\triangle CSD$ in $\triangle EST$?

A. $\overline{ES}$

B. $\overline{ST}$

C. $\overline{TE}$

D. $\overline{DC}$
- What the ratio of similarity if the two triangles are congruent?

A. $\frac{2}{3}$

B. $\frac{3}{2}$

C. $\frac{3}{4}$

D. $\frac{3}{5}$
- Which of the following notation best described the two similar triangle?

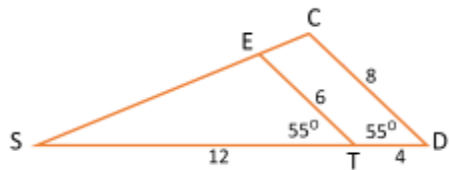
A. $\triangle EST \sim \triangle CDS$

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Using the figure below, answer the following:



- Which of the following proportions is correct?

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C. $\frac{SD}{TS} = \frac{SE}{SC}$

D. $\frac{ET}{CD} = \frac{SC}{SE}$
2. Which of the angle in $\triangle EST$ congruent to $\angle D$ of $\triangle CSD$?
A. $\angle E$ B. $\angle S$ C. $\angle T$ D. $\angle C$
3. Which side corresponds to $\overline{SD}$ of $\triangle CSD$ in $\triangle EST$?
A. $\overline{ES}$ B. $\overline{ST}$ C. $\overline{TE}$ D. $\overline{DC}$
4. What the ratio of similarity if the two triangles are congruent?
A. $\frac{2}{3}$ B. $\frac{3}{2}$ C. $\frac{3}{4}$ D. $\frac{3}{5}$
5. Which of the following notation best described the two similar triangle?
A. $\triangle EST \sim \triangle CDS$ C. $\triangle SET \sim \triangle SDC$
B. $\triangle ETS \sim \triangle CSD$ D. $\triangle STE \sim \triangle SDC$

Activity 10

SAS Similarity Theorem and Its Proof

Write the statements or reasons that are left blank in the proof of SAS Similarity Theorem. Refer to the hints provided to help you.

Given: $\frac{QR}{TU} = \frac{PR}{SU}; \angle R \cong \angle U$

Prove: $\triangle PQR \sim \triangle STU$

Proof:

- Construct X on $\overline{TU}$ such that
- From X, construct $\overline{XW}$ parallel to $\overline{TS}$ intersecting $\overline{SU}$ at W.

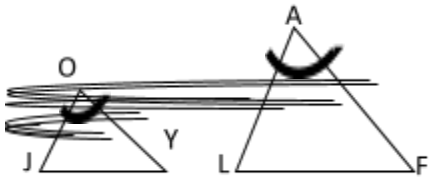
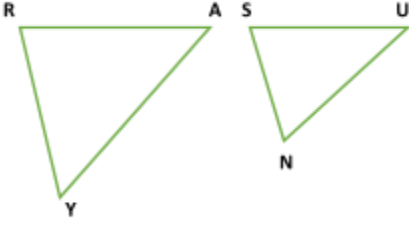
$\overline{XU} \cong \overline{QR}.$

to $\overline{TS}$ intersecting $\overline{SU}$ at W.

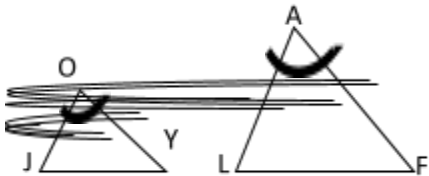
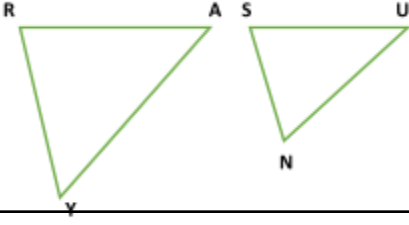
Hint		Statement	Reason
1	Which sides are parallel by construction?		By construction
2	Describe angles WXU & STU and XWU and TSU based on statement 1.		Corresponding angles are congruent.
3	Are triangles WXU and STU similar?		AA Similarity Theorem
4	Write the equal ratios of similar triangles in statement 3?		Definition of similar polygons
5	Write the congruent sides that resulted from construction.		By construction
6	Write the given related to sides.		Given
7	Use statement 5 in statement 6.		Substitution Property of Equality
8	If $\frac{XU}{TU} = \frac{PR}{SU}$ (statement 7) and $\frac{XU}{TU} = \frac{WU}{SU}$ (statement 4), then If $\frac{XU}{TU} = \frac{PR}{SU}$ (statement 7) and $\frac{QR}{TU} = \frac{PR}{SU}$ (statement 6), then		Transitive Property of Equality
9	Multiply the proportions in statement 8 by their		Multiplication Property of Equality

	common denominators and simplify.		
10	Write the given related to corresponding angles.		Given
11	What can you say about triangles PQR and WXU based on statements 9 and 10.		_____ Triangle Congruence Postulate
12	Write statement when the reason is the one shown.		Congruent triangles are similar.
13	Write a conclusion using statements 12 and 3.		Substitution Property

Use the SAS Similarity Theorem in writing an If-then statement to describe an illustration or in completing a figure based on an if-then statement.

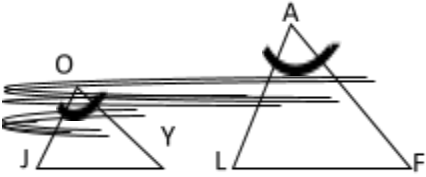
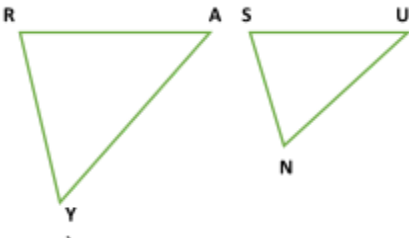
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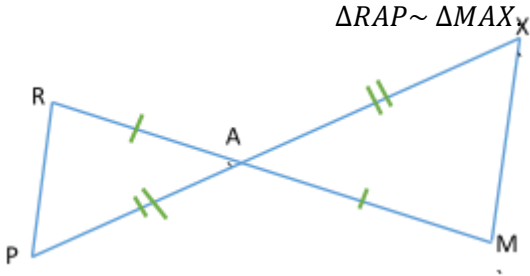
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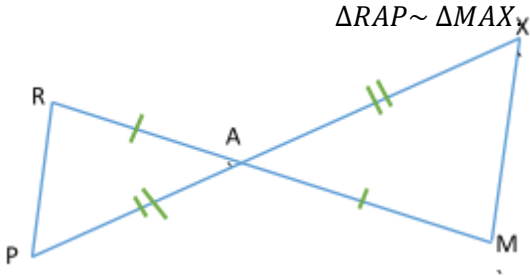
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Given the figure below, use the SAS Similarity Theorem to prove that



Hint		Statement	Reason
1	Write in a proportion the ratios of two corresponding proportional sides.		
2	Describe included angles of the proportional sides.		
3	Conclusion based on the simplified ratios.		

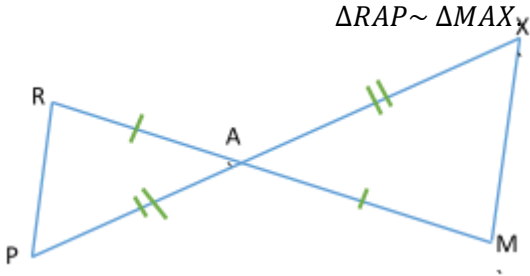
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