

DAILY LESSON LOG OF M9AL-IIIj-1 (Day One)

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, analyse, and solve problems involving parallelograms and triangle similarity through appropriate and accurate representation.		
C. Learning Competencies/ Objectives	Learning Competency: Solves problems that involve triangle similarity and right triangles. (M9AL-IIIj-1) Learning Objectives: 1. Identify similar triangles/figures 2. Solve problems involving triangle /polygon similarity 3. Demonstrate appreciation of solving real life problems involving similarity of triangles		
II. CONTENT	Solving Problems Involving the Similarity of Triangles		
III. LEARNING RESOURCES			
A. References			
1. Teacher’s Guide	Pages 253-255		
2. Learner’s Materials	Pages 382-384		
3. Textbook pages	Next Century Mathematics pp 286		
4. Additional Materials from Learning Resource (LR) portal			
B. Other Learning Resources			
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	The teacher presents the problem to the class and asks them, “Is it possible to give the height of the tower without directly measuring it?” A tower casts a shadow of 16 m at the same time that a 2.5 m post casts a shadow of 4 m. How high is the tower? Answer: Yes, by using the concepts on similar triangles which is useful in calculating heights/ distances of objects without direct measurement, like the tower. $\frac{\text{tower's height}}{\text{its shadow}} = \frac{\text{height of the post}}{\text{shadow of the post}}$ $\frac{x}{16\text{ m}} = \frac{2.5\text{ m}}{4\text{ m}}$ $x=10\text{ m}$		

B. Establishing a purpose for the lesson	The teacher will help the students realize that triangle similarity theorems are useful in answering real life problems involving triangles.
C. Presenting examples/ instances of the new lesson	The teacher divides the class into four groups. He/she then gives a strip of paper containing a problem for each group to solve and post for checking later on. Group1: The shadow of a man who is 165 cm tall is 370 cm long. If at the same time, the shadow of the tree is 620 cm long, how tall is the tree? Group 2: A plan has a scale of 1:4000. Find the dimensions in meters of a farm land which measures 8 cm by 5 cm on the plan. Group 3: How tall is a flagpole if a 3-m vertical stick casts a 4-m shadow at the same time that a flagpole casts a 9-m shadow? Group 4: If a map is drawn to the scale 1 cm to 190 km and the distance between towns A and B measures 6 cm on the map, what is the approximate distance between the two towns? Answer: 1. 276.49 cm 2. The farmland is 320m by 200 m 3. 6.75m 4. The actual distance is approximately 1140 km.
D. Discussing new concepts and practicing new skills #1	The teacher discusses with the students the process of getting the answer of activity. Furthermore, he/she asks the students about the mathematical skills or principles that they used to solve the problem.
E. Discussing new concepts and practicing new skills #2	
F. Developing mastery (leads to formative assessment 3)	Working in pairs, the teacher lets the students answer the problem below. Solve. Two towns are 20 km apart. What is the distance between these towns on a map which has a scale of 5 cm to 1 km? Answer: 2. 100 cm
G. Finding practical applications of concepts and skills in daily living	The teacher lets the students answer the problem individually. She may ask one student volunteer to show his/her solutions on the board. A model car was built to the scale 1:17. This means the model will be similar to the actual car, with 1 inch on the model car representing 17 inches on the actual car. If the model is 10.8 inches long, how long is the actual car? Answer : 183.6 inches long
H. Making generalizations and abstractions about the lesson	The teacher summarizes the mathematical skills or principles used to solve real-life situations using the concepts on triangle similarities like, - Similar polygons are polygons whose vertices can be paired in such a way that corresponding angles are congruent and corresponding sides are proportional. - When the ratios of corresponding sides are equal, we say that the sides are proportional and the common ratio is called the scale factor.
I. Evaluating Learning	The teacher lets the students answer individually the formative assessment. Solve the following: A piece of land measures 12 m by 15 m. What would be the dimensions in centimeters on a scale drawing if the scale is $\frac{1}{2}$ cm: 1 m? Answer : 6cm x 7.5 cm

J. 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	Problems were localized and contextualized.

Prepared by:



1. The shadow of a man who is 165 cm tall is 370 cm long. If at the same time, the shadow of the tree is 620 cm long, how tall is the tree?
2. A plan has a scale of 1:4000. Find the dimensions in meters of a farm land which measures 8 cm by 5 cm on the plan.
3. The sides of one triangle are x , 10, and 8 cm . The corresponding sides of the triangle similar to this triangle are 18, 15 and y cm. find the lengths of the sides of each triangle.
4. If a map is drawn to the scale 1 cm to 190 km and the distance between towns A and B measures 6 cm on the map, what is the approximate distance between the two towns?
5. The sides of one of two similar pentagon are a , b , 15 , c , and 15 cm. If the corresponding sides of the other pentagon are 28, 35, x , 56 and 7, how long are the sides of each pentagon?
- 6.
7. 2. Two towns are 20 km apart. What is the distance between these towns on a map which has a scale of 5 cm to 1 km?
8. A model car was built to the scale 1:17. This means the model will be similar to the actual car, with 1 inch on the model car representing 17 inches on the actual car. If the model is 10.8 inches long, how long is the actual car?

Solve the following:

1. A piece of land measures 12 m by 15 m. what would be the dimensions in centimeters on a scale drawing if the scale is $\frac{1}{2}$ cm: 1 m?
Solve.
2. The length and width of a rectangle have a ratio 2:3. The perimeter is 20 cm. Find the length and width of the rectangle.