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DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Mathematics

Quarter 2
Lesson
6

Learning Activity Sheet for Mathematics Grade 8
Quarter 2: Lesson 6 (Week 6)
SY 2025-2026

Development Team

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LEARNING ACTIVITY SHEET

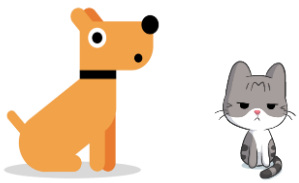
Learning Area:	Mathematics	**Quarter:**	2
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Basic Concept of Inequality		
Name:		**Grade & Section:**	

I. **Activity No. 1:** Short Review (15 mins.)

II. **Objective(s):** At the end of this activity, the learner should be able to illustrate the basic concept of inequality.

III. **Materials Needed:** pen, worksheets

IV. **Instructions:** Analyze the following pictures and write what they mean in words based on the concept of inequality.

Inequalities	Meaning
	**Example:** The boy is heavier that the girl. It means the weight of the boy is greater than the weight of the girl. In symbol, Boy Weight > Girl Weight.
	
	
	
	

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	2
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Triangle Inequality Theorems (Inequalities in One Triangle)		
Name:		**Grade & Section:**	

I. **Activity No. 2:** Group/Individual Task (20 mins.)

II. **Objective(s):** At the end of this activity the learner should be able to determine whether three given sides can form a triangle.

III. **Materials Needed:** pen, worksheets, and calculator

IV. **Instructions:** Use the triangle inequality to complete the table.

1. Write YES if the given length can form a triangle. Otherwise, NO if cannot. Show your complete solution.

Lengths	Solution	Answer YES/NO
a. 5, 10, 15		
b. 11, 12, 9		
c. 6, 9, 16		
d. $\frac{3}{4}, \frac{9}{7}, \frac{2}{3}$		
e. 1, 15, 16		

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	2
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Triangle Inequality Theorems (Inequalities in One Triangle)		
Name:		**Grade & Section:**	

I. **Activity No. 3:** Individual/Group Task (20 mins.)

II. **Objective(s):** At the end of this activity, the learner should be able to find the range of possible values of the third side of a triangle given two of its sides.

III. **Materials Needed:** pen, worksheets

IV. **Instructions:** Use the triangle inequality to complete the table.

1. Two sides of a triangle have the following measures. Find the range of possible measures for third side. Show your complete solution.

Lengths	Solution	Range
a. 14, 11		
b. 47, 21		
c. 5, 8		
d. 11, 20		
e. 6, 10		

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	2
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Triangle Inequality Theorems (Inequalities in One Triangle)		
Name:		**Grade & Section:**	

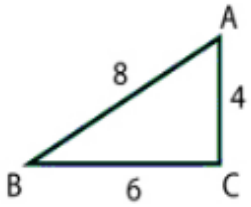
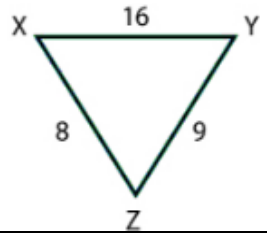
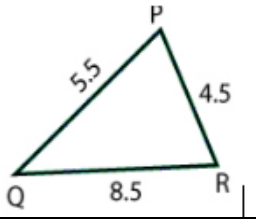
I. **Activity No. 4:** Reflection Activity (20 mins.)

II. **Objective(s):** At the end of this activity, the learner should be able to determine whether three given sides can form a triangle.

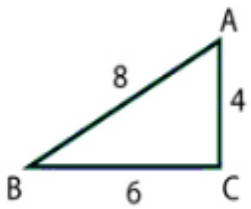
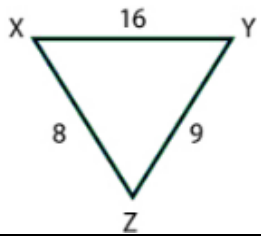
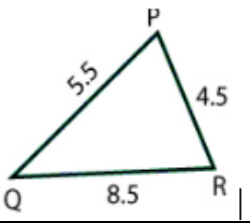
III. **Materials Needed:** pen, worksheets

IV. **Instructions:** Use the triangle inequality to complete the table.

A. Name the largest and the smallest angle.

1. 	2. 	3. 
Answer:	Answer:	Answer:

B. List the sides in descending order.

1. 	2. 	3. 
Answer:	Answer:	Answer:

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	2
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Exterior Angle Inequality Theorem		
Name:		**Grade & Section:**	

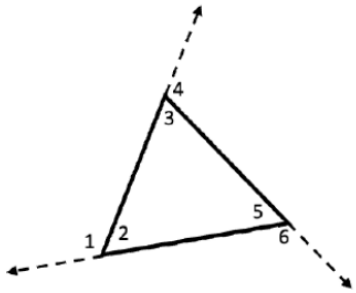
I. Activity No. 5: Formative Assessment (20 mins.)

II. Objective(s): At the end of this activity the learner should be able to illustrate the exterior angle inequality of the triangle.

III. Materials Needed: pen, worksheets

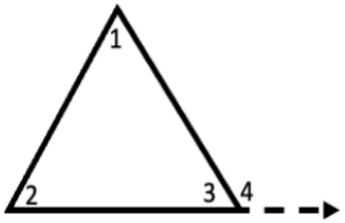
IV. Instructions:

A. Complete the table using the figure below.



Exterior Angles	Remote Interior Angles	Equation Formed Based on the Theorem

B. Use the figure at the right to find the measures of the indicated angles.



Given	Solution	Answer
Given: $m\angle 4 = 9x - 14$ $m\angle 1 = 4x + 2$ $m\angle 2 = 3x + 14$ **Find:** $m\angle 4$ and $m\angle 2$		
Given: $m\angle 4 = 3x - 7$ $m\angle 1 = x + 25$ $m\angle 2 = x - 14$ **Find:** $m\angle 4$ and $m\angle 2$		
Given: $m\angle 4 = 5x$ $m\angle 1 = 2x - 13$ $m\angle 2 = x + 45$ **Find:** $m\angle 4$ and $m\angle 3$		

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	2
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Inequality Triangle Theorem; Exterior Angle Inequality Theorem		
Name:		**Grade & Section:**	

I. Activity No. 6: Formative Assessment (30 mins.)

II. Objective(s): At the end of this activity the learner should be able to:

a. determine whether three given sides can form a triangle;
b. find the range of possible values of the third side of a triangle given two of its sides;
c. illustrate the exterior angle theorem; and
d. illustrate the exterior angle inequality of the triangle.

III. Materials Needed: pen, worksheets

IV. Instructions: Complete the table below.

A. Write F if the three given lengths can form a triangle. Otherwise, CF cannot. Write your answer on the space provided.

_____1) 7, 5, 4 _____6) 5, 8, 4

_____2) 3, 6, 2 _____7) 4, 7, 8

_____3) 5, 2, 4 _____8) 11, 12, 9

_____4) 8, 2, 8 _____9) 2, 10, 8

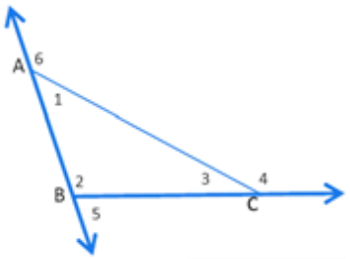
_____5) 9, 6, 5 _____10) 1, 13, 13

B. Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

1. 9, 5 _____
2. 5, 8 _____
3. 6, 10 _____
4. 6, 9 _____
5. 11, 8 _____

C. State the order or relation between the following angles pairs.

1. ∠1 and ∠4 _____
2. ∠3 and ∠6 _____
3. ∠4 and ∠2 _____
4. ∠1 and ∠5 _____
5. ∠6 and ∠2 _____



D. Determine whether the given inequality is TRUE or FALSE.

_____ 1. m∠1 is greater than m∠5
_____ 2. m∠3 is less than m∠2
_____ 3. m∠4 is greater than m∠6
_____ 4. m∠1 is greater than m∠4
_____ 5. m∠5 is less than m∠3
_____ 6. m∠6 is less than m∠2