7

DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Mathematics

Quarter 1
Lesson
3

Learning Activity Sheet for Mathematics Grade 7
Quarter 1: Lesson 3 (Week 3)
SY 2024-2025

Development Team

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LEARNING ACTIVITY SHEET

Learning Area:	Mathematics 7	**Quarter:**	1
Lesson No.:;	3	**Date**	
Lesson Title/ Topic:	Exterior Angle and Adjacent Interior Angle		
Name:		**Grade & Section:**	

I. Activity 1: Measure and Record (10 minutes)

II. Objective(s): At the end of the lesson, the students are expected to:

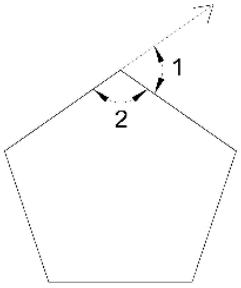
a. measure the exterior angle and its adjacent interior angles in a polygon; and

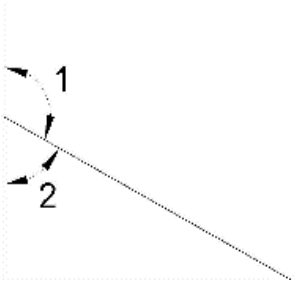
b. share their observations made from Table 1 in activity 5.

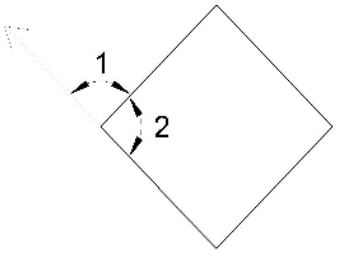
III. Materials Needed: Protractor and a drawing of a polygon with pairs of Exterior Angle and Adjacent Interior Angle, Copy of Table 1. Measures of Exterior Angle and its Adjacent Interior Angle of a Polygon

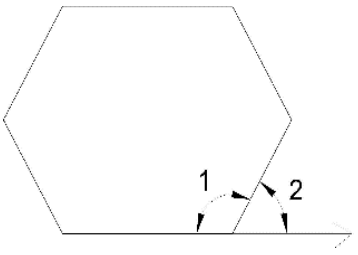
IV. Instructions:

A. Measure the angles and record on a separate paper following the table format below.

1. 

2. 

3. 

4. 

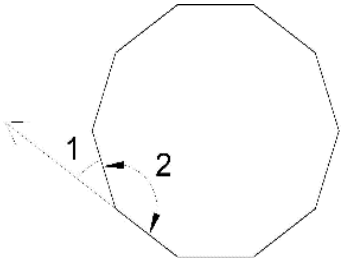
5. 

Table 1. Measures of Exterior Angle and its Adjacent Interior Angle of a Polygon

Name of Polygon	Measure of the indicated interior Angle	Measure of its Adjacent Interior Angle	Sum or total of the two measures
1.			
2.			
3.			
4.			
5.			

B. Look closely and compare each table. Answer the following questions below.

1. What do you notice about the measure of the exterior angle and its adjacent interior angle?

   _____
   _____
   _____

2. What is common to the sum in the last column?

   _____
   _____
   _____

3. Describe the position of these two angles? What is common?

   _____
   _____
   _____

4. What conclusion can be drawn from your observations?

   _____
   _____
   _____

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Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date**	
Lesson Title/ Topic:	Exterior Angle and Adjacent Interior Angle		
Name:		**Grade & Section:**	

I. Activity 2: Who Am I?

II. Objective(s): At the end of the lesson, the students are expected to unlock the following terms: Exterior Angle, Interior Angle, Adjacent Angles, Protractor, Linear Pair, Supplementary Angles, Complementary Angles, Sum, Polygon, Angle

III. Materials Needed: pen and paper

IV. Instructions: Identify the term being asked.

1. I am an angle formed outside a polygon, who am I? _____
2. I am an angle inside a polygon, who am I? _____
3. I am the term used to describe the two angles with a common side and a common vertex, who am I? _____
4. I am a measuring device used to measure an angle, who am I? _____
5. I am formed by two angles that have a common side, and a common vertex and form a line, who am I? _____
6. We are angles whose sum is 180°, who are we? _____
7. We are angles whose sum is 90°, who are we? _____
8. I am another term used for total, who am I? _____
9. I am a closed figure made up of line segments in a two-dimensional plane, who am I? _____
10. I am a figure formed by two rays with a common vertex, who am I? _____

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Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date**	
Lesson Title/ Topic:	Exterior Angle and Adjacent Interior Angle		
Name:		**Grade & Section:**	

I. Activity 3: Independent Practice (5 minutes)

II. Objective(s): The students are expected to answer the short assessment.

III. Materials Needed: pen and paper

IV. Instructions: Match each angle with its corresponding measure, given m∠1 = 130° and m∠7 = 70°. Indicate a match by writing the letter for the angle on the line in front of the corresponding angle measure.

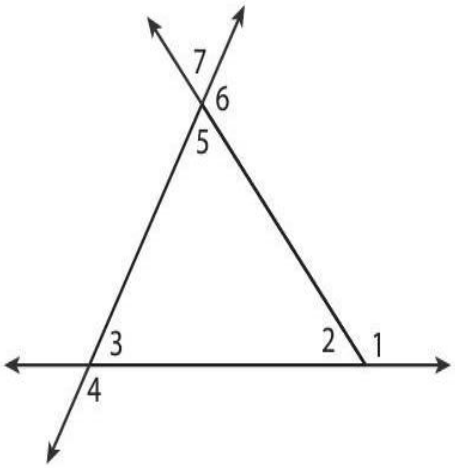
A. m∠2 _____ 50°

B. m∠3 _____ 60°

C. m∠4 _____ 70°

D. m∠5 _____ 110°

E. m∠6 _____ 120°



LEARNING ACTIVITY SHEET

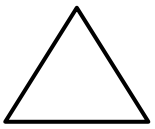
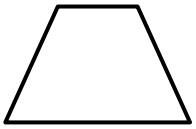
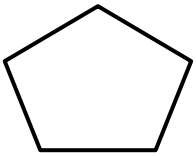
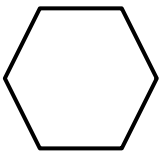
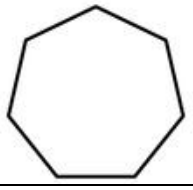
Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date**	
Lesson Title/ Topic:	Relationship between exterior angle and adjacent interior angle		
Name:		**Grade & Section:**	

I. **Activity 4:** Sum of the interior angles of a polygon (5 minutes)

II. **Objective(s):** The students are expected to answer the short assessment.

III. **Materials Needed:** pen and paper

IV. **Instructions:** Complete the table below.

Name of the Polygon	**No. of Sides (n)**	**How many triangles can you form if you draw diagonals from a single vertex? (t)**	**180*t (Why?)**	**Sum of the interior angles**
triangle				
quadrilateral				
pentagon				
hexagon				
heptagon				
In general,				

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.	3	**Date**	
Lesson Title/ Topic:	Determination of measures of angles and numbers of sides of regular polygons		
Name:		**Grade & Section:**	

I. Activity 5: Complete Me! (5 minutes)

II. Objective(s): The students are expected to answer the short assessment.

III. Materials Needed: pen and paper

IV. Instructions: Complete the table below. Show all solutions.

	# Sides	*Interior Angle Sum*	*Measure of ONE INTERIOR Angle (Regular Polygon)*	*Exterior Angle Sum*	*Measure of ONE EXTERIOR Angle (Regular Polygon)*
1)	*n*				
2)	14				
3)	24				
4)	17				
5)		1080°			
6)		900°			
7)		5040°			
8)		1620°			
9)			150°		
10)			120°		
11)			156°		
12)					10°
13)					7.2°
14)					90°
15)					5°

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date**	
Lesson Title/ Topic:	Exterior Angle and Adjacent Interior Angle		
Name:		**Grade & Section:**	

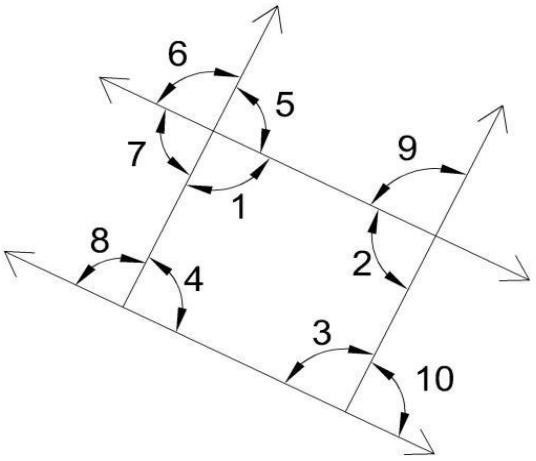
I. Activity 6: Assessment (10 minutes)

II. Objective(s): The students are expected to determine the measures of angles and numbers of sides of polygons

III. Materials: diagram, pen, and paper

IV. Instructions: Read the questions below carefully.

Figure 2. Sum of two angles



A. Use the figure below. Answer each number using a separate sheet of paper.

1. What is the sum of the measure of ∠ 5 and ∠ 1?
2. Angle 4 is the interior angle adjacent to what exterior angle?
3. What is the relationship of ∠ 1 *and* ∠6, ∠ 7 *and* ∠5, are they supplementary? Or why not?
4. Which interior angle is adjacent to ∠ 5?
5. Why is the measure of ∠9 and ∠ 2 is 180°?

B. Write "TRUE" if the statement is correct, if false, correct the underlined word/s to make it true.

1. The sum of the measure of an exterior angle and its adjacent interior angle is <u>always</u> 180°.
2. The measure of an exterior angle and its adjacent interior angle is <u>always</u> equal.
3. The exterior angle and its adjacent interior angle form a <u>linear pair.</u>
4. Linear pairs are always <u>complementary.</u>
5. An exterior angle is always <u>supplementary</u> to its adjacent interior angle.

C. Answer the following questions. Show all solutions and encircle all final answers.

1. What is the sum of all the measures of angles in a triangle?
2. What is the sum of all angles in a heptagon?
3. How many triangles can be created/formed in a decagon?
4. How can you solve for the total or sum of all angles in a polygon without actual measurements?
5. How will you solve for the measure of an exterior angle of any regular polygon?