

# Mathematics 4

## Microlearning Module

### QUARTER 1 – Module 4

#### *Classifying Triangles and Quadrilaterals According to Sides and Angles*



## **Mathematics 4**

### **Microlearning Module (MLM)**

#### **Quarter 1 – Module 4: Classifying Triangles and Quadrilaterals According to Sides and Angles.**

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## MICROLEARNING MODULE

Name: \_\_\_\_\_ Grade & Sec: \_\_\_\_\_ Score: \_\_\_\_\_

Subject: Mathematics Quarter: 1 MLM No. 4

Teacher: \_\_\_\_\_

Competency: Classify triangles and quadrilaterals according to sides and angles

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### A. Look Back!

Answer Me!

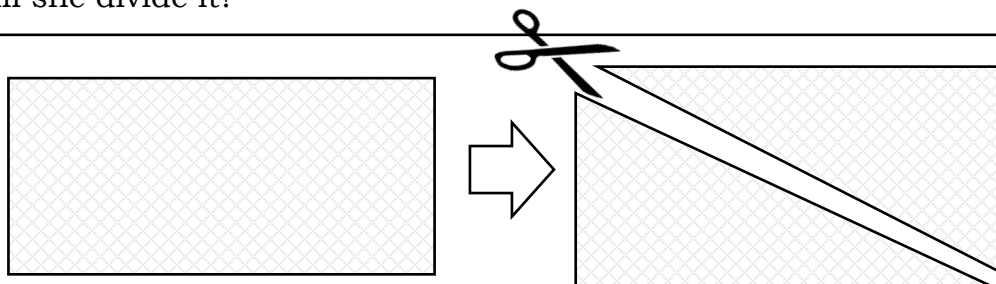
“What Am I?”

- a. I am the common endpoint of an angle. \_\_\_\_\_
- b. I am an angle whose measure is  $90^\circ$ . \_\_\_\_\_
- c. I am an angle whose measure is less than  $90^\circ$ . \_\_\_\_\_
- d. I am an angle whose measure is more than  $90^\circ$  but less than  $180^\circ$ . \_\_\_\_\_

### B. What's New?

Read and answer the question that follows:

Mrs. Santos bought a cartolina for her Math class. She needs two triangles of the same size without wasting any part of the cartolina. How will she divide it?

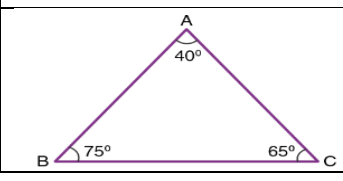
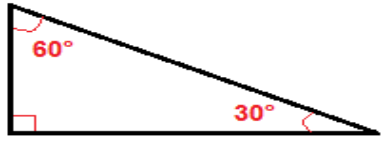
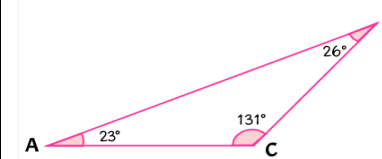


What shapes are formed?


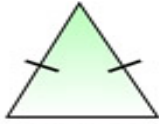
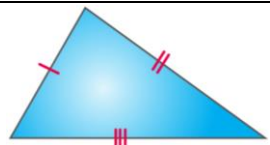
### C. What Is It?

**Triangles** are three-sided, closed figures, and they can be classified based on the lengths of their sides and the measures of their angles.

### Triangles According to its Angles

Name	Figure	Definition
<b>Acute Triangle</b>		All angles are less than $90^\circ$ .
<b>Right Triangle</b>		It has one right angle that measures $90^\circ$ .
<b>Obtuse Triangle</b>		One angle measures more than $90^\circ$ .

### Triangles According to its Sides

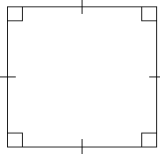
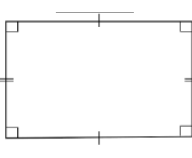
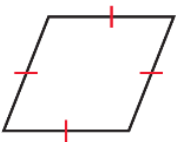
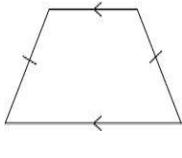
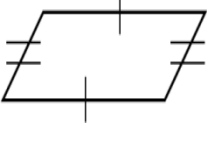
Name	Figure	Definition
<b>Equilateral Triangle</b>		All sides are equal.
<b>Isosceles Triangle</b>		Two sides are equal.
<b>Scalene Triangle</b>		Has no equal sides.

**Quadrilaterals** are four-sided, closed figures, and they can also be classified based on the lengths of their sides and the measures of their angles.

*Classifying Quadrilaterals:*

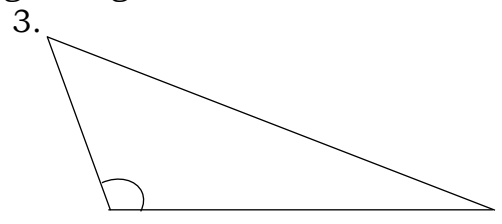
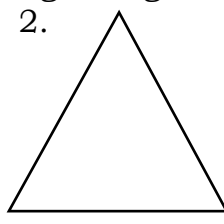
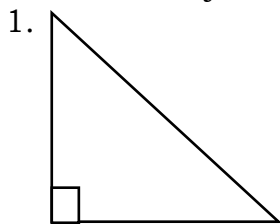
1. **Square**- A quadrilateral with all four sides of equal length and all four angles right angles ( $90^\circ$ ).
2. **Rectangle**- A quadrilateral with opposite sides of equal length and all four angles right angles.
3. **Rhombus**- A quadrilateral with all four sides of equal length.
4. **Trapezoid**- A quadrilateral with at least one pair of parallel sides.
5. **Parallelogram**- A quadrilateral with opposite sides parallel and opposite angles equal.

## Types of Quadrilaterals

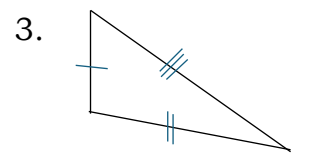
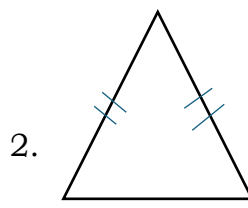
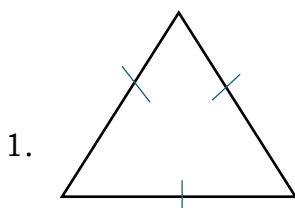
Quadrilaterals	Square	Rectangle	Rhombus	Trapezoid	Parallelogram
One pair of opposite sides is parallel					
Two pairs of opposite sides are parallel				✓	
Two pairs of opposite sides are congruent	✓	✓	✓		✓
All sides are congruent	✓		✓		
All angle measures 90 degrees	✓	✓			

### D. Let's Try!

A. Identify the following triangles according to angles.



B. Identify the following triangles according to their sides.



C. Answer the following questions by putting a check mark ( ✓ ) in the blank if your answer is Yes and **X** if it is No.

- \_\_\_\_\_ 1. Is a parallelogram a rectangle?
- \_\_\_\_\_ 2. Is a trapezoid a parallelogram?
- \_\_\_\_\_ 3. Is a square a rectangle?
- \_\_\_\_\_ 4. Is a rhombus a square?
- \_\_\_\_\_ 5. Is a rectangle a parallelogram?

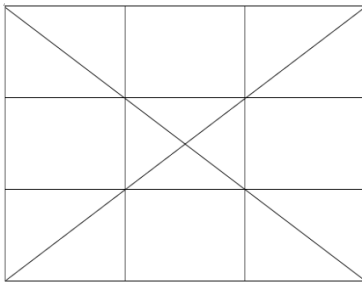
### D. Let's Evaluate

Directions: Read each statement carefully. Write **TRUE** if the statement is correct, and **FALSE** if it is incorrect.

- \_\_\_\_\_ 1. An equilateral triangle has all sides of equal length.
- \_\_\_\_\_ 2. A scalene triangle has two sides of equal length.
- \_\_\_\_\_ 3. An obtuse triangle has one angle greater than 90 degrees.
- \_\_\_\_\_ 4. A square is a type of parallelogram.
- \_\_\_\_\_ 5. A rectangle has four right angles.
- \_\_\_\_\_ 6. A rhombus has all sides of equal length.
- \_\_\_\_\_ 7. A trapezoid has no parallel sides.
- \_\_\_\_\_ 8. An isosceles triangle has at least two sides of equal length.
- \_\_\_\_\_ 9. A regular quadrilateral has all angles equal in measure.
- \_\_\_\_\_ 10. A square is a quadrilateral with all four sides of equal length and all four angles right angles.

### Challenge!

How many triangles and quadrilaterals are there in the figure below?



Number of triangles:

\_\_\_\_\_

Number of quadrilaterals:

\_\_\_\_\_

## **E. References**

Chingcuangco, O. G. *Soaring High with Mathematics 4 Textbook*.2019.  
Quezon City: Saint Mathew's Publishing

Tabilang, A. R., Ian Jay B. Arce, & R.V. Pascua, *Mathematics 4  
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MATH Grade4\_Q1\_LC4

Answer Key!

<p><b>A. Look Back!</b></p> <p>a. vertex b. right angle c. acute angle d. obtuse angle</p>	<p><b>E. Let's Evaluate</b></p> <p>1. TRUE 2. FALSE 3. TRUE 4. TRUE 5. TRUE 6. TRUE 7. FALSE 8. TRUE 9. TRUE 10. TRUE</p>
<p><b>D. Let's try!</b></p> <p>A. 1. right triangle 2. acute triangle 3. obtuse triangle B. 1. equilateral triangle 2. isosceles triangle 3. scalene triangle C. 1. <b>X</b> 2. <b>X</b> - A trapezoid is not a parallelogram. A trapezoid only has one pair of parallel sides, while a parallelogram has two pairs of parallel sides. 3. ✓ 4. <b>X</b> 5. ✓</p>	<p><b>Challenge!</b></p> <p>Number of triangles: 16 (smallest) + 8 (medium) + 4 (large) = **28 triangles</p> <p>Number of quadrilaterals: Adding all the counts together: • 1x1: 12 • 2x1 and 1x2: 8 + 9 = 17 • 2x2: 6 • 3x1 and 1x3: 4 + 3 = 7 • 3x2 and 2x3: 3 + 2 = 5 • 3x3: 1 Total quadrilaterals = 12 + 17 + 6 + 7 + 5 + 1 = 48 quadrilaterals</p>