



Microlearning Module

QUARTER 1 – Module 7

Finding the Perimeter of Composite Figures



Mathematics 4 Microlearning Module (MLM) Quarter 1 – Module 7: Finding the Perimeter of Composite First Edition, 2024

Republic Act 8293, Section 176 states that "No copyright shall subsist in any work of the Government of the Philippines." However, obtaining prior approval from the government agency or office where the work originated is required for the commercial use of such work. This agency or office may, among other things, impose as a condition the payment of royalties.

Materials borrowed for this module (e.g., songs, stories, poems, images, brand names, trademarks, etc.) are the property of their respective copyright owners. The publisher and authors do not assert ownership or representation over them.

Published by the Department of Education- RO XII, Division of Sultan Kudarat

		Development Team			
Writer	:	Harold S. Capulot			
Editor	:	Gaudeser R. Pacete			
Evaluator	:	Gaudeser R. Pacete			
Cover Art Designer: Jann Mark P. Oriel					
Management Team: Crispin A. Soliven Jr., CESE – Schools Division Superintendent					
		Meilrose B. Peralta EdD – Asst. Schools Division Superintendent			
		Ismael M. Ambalgan – Chief, CID			
		Sheryl L. Osano – EPS, LRMS			
		Rodolfo B. Bermudo, Jr. EdD - EPS - Mathematics			

Printed in the Philippines by

Department of Education – Region XII, Division of Sultan Kudarat

Office Address: Kenram, Isulan, Sultan Kudarat Telefax: 064-471-1007 E-mail Address: depedsk.r12@deped.gov.ph

MICROLEARNING MODULE

Name:		_Grade & S	bec:	Score:		
Subject: <u>Mathematics 4</u>		Quarter:	1	_MLM No	7	
Teacher:						
Competency:	cy: Find the perimeter of composite figures composed of triangles					
	and quadrilaterals					

A. Look Back!

Read each statement carefully and answer.

- 1. What is the formula to find the perimeter of a parallelogram?
- 2. What is the formula to find the perimeter of a rhombus?
- 3. What is the formula to find the perimeter of a trapezoid?
- 4. If a parallelogram has sides of 6 and 8 units, what is its perimeter?
- 5. A rhombus has diagonals of 10 and 14 units. What is its perimeter?

B. What's New?

Joshua has been growing vegetables in his backyard for the past weeks. As his garden has expanded, it has taken on an irregular shape, with a combination of triangular and quadrilateral sections. Joshua has decided that it's time to install a fence around the garden to keep out any unwanted visitors, such as goats or cows, that might try to eat and destroy his garden.



To ensure that he purchases the right amount of fencing material, Joshua needs to calculate the total perimeter of his composite-shaped garden. He starts by sketching out the layout of the garden, identifying the individual triangular and quadrilateral sections that make up the overall shape.

In the triangular section, Joshua measures the sides and finds that they are 8 feet, 10 feet, and 12 feet long. For the quadrilateral sections, he measures the sides and finds that they are 15 feet, 18 feet, 12 feet, and 20 feet long.



Joshua knows that to find the perimeter of the triangular section, he needs to add up the lengths of all the outer sides except the part that will be attached to the other figure. In this case, he will exclude 12 ft.:

$$8 \text{ feet} + 10 \text{ feet} = 18 \text{ feet}.$$

For the quadrilateral sections, he calculates the perimeter of each one separately. He excludes the part that will be attached to the other figure, which is 12 ft.:

Finally, Joshua adds up the perimeters of the triangular and quadrilateral sections to get the total perimeter of his composite-shaped vegetable garden:

18 feet + 53 feet = 71 feet.

With this information, Joshua can now buy the right length of fencing material to enclose his thriving garden and protect his valuable crops from unwanted visitors.

C. What Is It?

A composite figure is a shape composed of two or more simple geometric figures, such as triangles and quadrilaterals.

Examples:



To find the perimeter of a composite figure, we need to identify the distinct shapes that make up the figure and then add up the lengths of all the sides. We do not include the part that is attached to another figure.

When dealing with composite figures, it's important to remember that:

-A composite figure is a combination of two or more shapes. The name composite comes from the Latin word "componere" which translates as "put together." A composite shape is also known as a combined figure and can be made up of the same or different shapes. For example, a composite figure may be made by combining two rectangles. A composite figure may also be formed by a square and a triangle. Example 1 :

Find the perimeter of the figure below:



Step 1: By examining the figure, we can see that the missing side has a length equal to the other two horizontal sides combined. By adding these two lengths together, we can find the length of the missing side:

The missing side has a length of 7 feet.

Step 2: We can find the perimeter by adding the length of every side of the figure together:

$$P= 12 ft + 4 ft + 7ft + 3ft + 5ft + 7ft = P= 38 ft$$

Example 2





The missing length<u>s are 16</u> cm, 6 cm, and 13 cm.



Step 2: Add all the side lengths.

$$13 + 7 + 6 + 5 + 6 + 4 + 13 + 16 = 70$$

Step 3: Write the final answer with the correct unit.

The perimeter of the composite figure is 70 cm.

D. Let's Try!

Find the perimeter of the figure below.



Solution: Let's divide the figure into a triangle and a rectangle.



Now, we must apply what we know about triangles. The triangle at the top of the figure is equilateral, so we know that all sides are congruent, while at the bottom is a rectangle.

E. Let's Evaluate



- II. Read the following situation, and choose the letter of the correct answer.
 - 1. What is the perimeter of a composite figure made up of a square with a side length of 5 cm and an equilateral triangle with a side length of 6 cm?

a) 22 cm b) 27 cm c) 33 cm d) 38 cm

- 2. A composite figure is made up of a rectangle with a length of 8 cm and a width of 5 cm, and an isosceles triangle with a base of 8 cm and equal sides of 7 cm. What is the perimeter of this figure?
 a) 26 cm
 b) 32 cm
 c) 36 cm
 d) 46 cm
- 3. A composite figure consists of a parallelogram with a base of 10 cm and side of 6 cm, and a scalene triangle with legs 6 cm, 4 cm, and 3 cm. What is the perimeter of this figure?
 a) 23 cm
 b) 33 cm
 c) 41 cm
 d) 44 cm
- 4. The composite figure is made up of a rhombus with 8 cm side , and a scalene triangle with sides 5 cm, 7 cm, and 8 cm. What is the perimeter of this figure?

a) 36 cm b) 49 cm c) 45 cm d) 50 cm

5. A composite figure consists of a kite with side lengths of 6 cm and 4 cm, and a trapezoid with parallel sides of 8 cm and 4 cm, and non-parallel sides of 6 cm. What is the perimeter of this figure?

a) 29 cm	b) 33 cm	c) 36 cm	d) 45 cm
		,	

Challenge!

Read and analyze.

The square kitchen in Dodong's new house has a side of 5 meters. A square pantry is connected to the kitchen area. The pantry is 2 meters wide. Both the kitchen and pantry will be installed with 20-meter LED light.

What is the perimeter of the kitchen and pantry?_

Is the LED light enough or lacking? If it is lacking, how many more meters are still needed?

F. References

Tabilang, A.R., Ian Jay B. Arce, & R.V. Pascua, *Mathematics 4 Learner's Materials*.2015. Pasig City: Department of Education

https://www.math-salamanders.com/perimeter-of-different-shapesworksheet.html https://www.tutoringhour.com/files/perimeter/customary/composit e-shapes-1.pdf

DISCLAIMER

This Microlearning Module has been developed by DepEd -Division of Sultan Kudarat for educational purposes only. It is designed to supplement classroom instruction and should not be used as the sole source of information. Teachers are encouraged to exercise their professional discretion and tailor the content to suit their students' individual needs.

This resource is the exclusive property of DepEd-Division of Sultan Kudarat and is accessible to enrolled learners solely for academic purposes, at no cost. Any reproduction or conversion of this material in any form is strictly prohibited.

M

Answer Key

A. Look Back!	B. Let's Try!
1. $P = a + b + c + d$	
Or P = S1 + S2 + S3 + S4	P = 4 units + 4 units +
2. 2. P = a + b + c + d	6 units + 4 units +
Or P = S1 + S2 + S3 + S4	6 units
3. 3. P = a + b + c + d	P = 24 units
Or P = S1 + S2 + S3 + S4	
4. P = 28 units	
5. P = 48 units	
E. Let's Evaluate	G. Challenge!
I. 1.35 in	1. 24 meters
2. 33 in	Lacking, by 4 meters
3. 70 dm	
4. 170 cm	
5. 70 mm	
II. 1. b	
2. b	
3. b	
4. a	
5. c	