MATHEMATICS

Quarter 4 - Module 8
The Perimeter of Triangles, Squares, and Rectangles

MATHEMATICS - Grade 2
Quarter 4 - Module 8 Perimeter of Triangles, Squares, and Rectangles
Self-Learning Module (SLM)
MATATAG Curriculum
First Edition, 2025

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Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are clearly stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

A Pre-test is provided to measure your prior knowledge on lessons in each SLM. This will tell if you need to proceed on completing this module, or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teachers are also provided to the facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. Read carefully the instructions before performing each task.

If you have any questions in using this SLM or any difficulty in doing the tasks in this module, do not hesitate to consult your teachers or facilitator.

Thank you.

For the learner

Welcome to the Mathematics - Grade 2 Self-Learning Module (SLM) on Perimeter of Triangles, Squares, and Rectangles!

In this learning resource, you will have the opportunity to enjoy and successfully achieve relevant competencies at your own pace.

This module offers fun and meaningful opportunities for both guided and independent learning. You will engage with the material and become an active participant in your learning journey.

This module has the following parts and corresponding icons:

	What I Need to Know	This gives you an idea of the skills or competencies you are expected to learn in the module.
	What I Know	This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correctly, you may decide to skip this part.
	What's In	This is a brief drill or review to help you link the current lesson with the previous one.
	What's New	In this portion, the new lesson is introduced to you in various ways such as through a story, a song, a poem, a problem opener, an activity or a situation.
	What is It	This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.
	What's More	This comprises activities for independent practice to concretize your understanding and skills about the topic. You may check the answers to the exercises using the Answer Key at the end of the module.

	What I Have Learned	This includes questions or blank sentence/ paragraph to be filled in to process what you learned from the lesson.
	What I Can Do	This section provides an activity which will help you transfer your new knowledge or skill into real life situations or events.
	Assessment	This is a task which aims to evaluate your level of mastery in achieving the learning competency.
	Additional Activities	In this portion, another activity is given to you to enrich your knowledge or skill of the lesson learned. It also ensures retention of learned concepts.
	Answer Key	This contains answers to all activities in the module.

At the end of this module, you will also find:

| | **References** | This is a list of all sources used in developing this module. |

The following are some reminders in using this module:

1. Use the module with care. Avoid unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Answer *What I Know* before moving on to the other activities included in the module.
3. Carefully read the instructions before doing each task.
4. Observe honesty and integrity in doing the tasks and in checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in doing the tasks in this module, consult your teacher or facilitator. Always bear in mind that you are not alone. We hope that through this material, you will experience meaningful learning and gain a deep understanding of the relevant competencies.

For the facilitator

Welcome to the Mathematics Grade 2 Self-Learning Module on Perimeter of Triangles, Squares and Rectangles!

The Curriculum Implementation Division (CID) through the Learning Resource Management Section (LRMS) launched this module in cooperation with the Division's Teacher Developers, Learning Resource Evaluators (LREs), Information and Technology Officer, and subject matter experts in Mathematics and English. This has been especially developed, quality-assured, and validated to enable you to help the learners overcome their educational obstacles—personal, social, and economic—while meeting the standards outlined in the MATATAG Curriculum.

This learning resource hopes to engage the learners in guided and independent learning activities. It further aims to help them acquire the needed 21st century skills while taking into consideration their needs and circumstances.

As a facilitator, you are expected to orient the learners on how to use this module. You also need to keep track of their progress while allowing them to manage their learning. In addition, you are enjoined to encourage and assist the learners as they do the tasks contained in the module.

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MATHEMATICS
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Squares, and Rectangles

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MATATAG
Bansang Makabata Batang Makabansa

What I Need to Know

This module was designed and written with you in mind. It is here to help you master the lesson in finding and solving perimeter of triangles, rectangles and squares. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using. This module focuses on:

- Find the perimeter of triangles, squares, and rectangles
- Solve problems involving perimeter of triangles, squares, and rectangles.

After going through this module, you are expected to:
1. Find the perimeter of triangles, squares, and rectangles
2. Solve problems involving perimeter of triangles, squares, and rectangles

Lesson 1- Finding the Perimeter of Triangles, Squares and Rectangles

What I Know

Hello Kid! Are you excited to learn a new lesson? Let's start by answering the activity.

Directions: Find the perimeter of each shape. Write the letter of the correct answer.

1.
5 cm
5 cm 5 cm
5 cm

a. 20 cm
b. 23 cm
c. 25 cm
d. 28 cm

2.
3 m 3 m
2 m

a. 6 m
b. 8 m
c. 10 m
d. 12 m
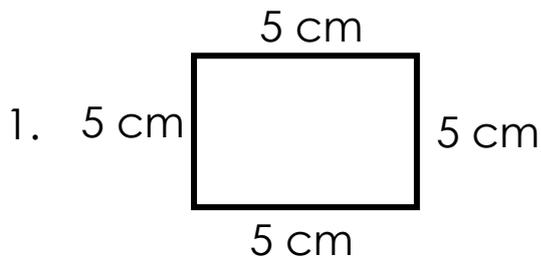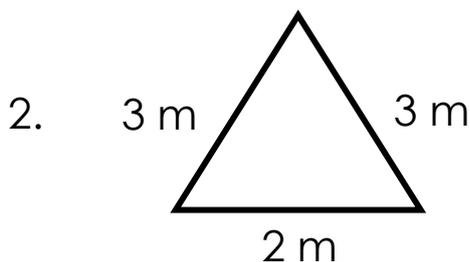
3.
18 cm
12 cm 12 cm
18 cm
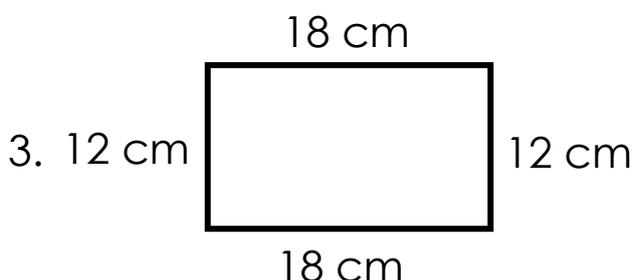
a. 40 cm
b. 50 cm
c. 60 cm
d. 70 cm

4. 5 cm

10 cm

10 cm
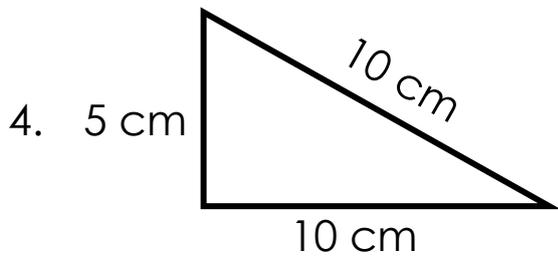
a. 20 cm
b. 25 cm
c. 30 cm
d. 35 cm

5. 15 m

12 m

15 m

12 m
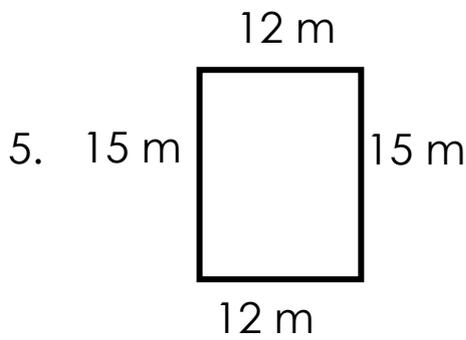
a. 58 m
b. 54 m
c. 51 m
d. 50 m

What's In

Very Good! Do you remember our lesson about plane figures? Try to answer the activity below.

**Directions:** Identify the name of the following plane figures.

1. _____

2. _____

3. _____

4. _____

5. _____
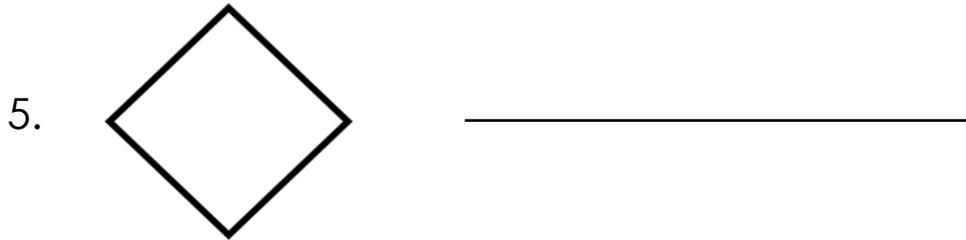
💡📖 What's New

Good job! Today, we are going to explore new learning. Are you ready now?

Directions: Read the situation inside the box and answer the questions below.

Aling Sonya bought a rectangular picture frame in the mall. It has 12 cm length and 8 cm width.

8 cm
12cm   12cm
8 cm
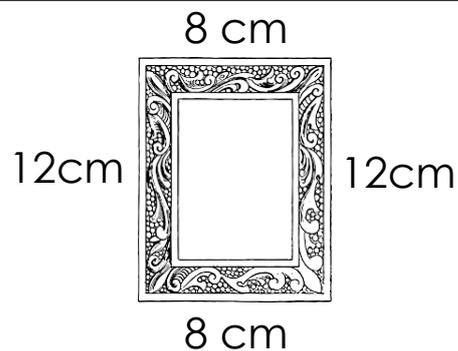
1. What did Aling Sonya buy in the mall? _____

2. What is the shape of the picture frame? _____

3. What is the length of the picture frame? _____

4. What is the width of the picture frame? _____

![A child reading a book] **What is It**

Amazing! Today, we are going to learn on how to find the perimeter of the rectangle, square and triangle.

Perimeter (P) is the measurement of the around a closed figure.

- To get the perimeter of a **rectangle**, add the measure of each side. Use this formula:

  P=(W+W) + (L+L)

Where: **L** means length
              W means width
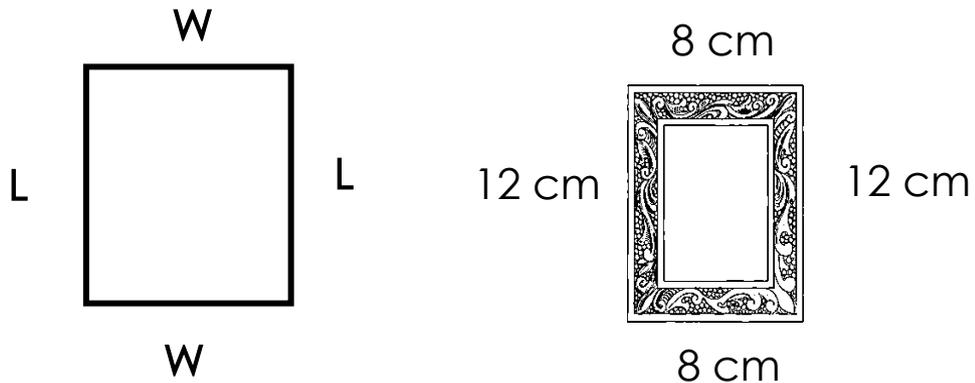
P = (W+W) + (L + L)

P = (8 cm + 8 cm) + (12 cm + 12 cm)

P = 16 cm + 24 cm

P = 40 cm

So, the perimeter of the square is **40 cm**.

- Another way is to multiply the length and the width by 2 since a rectangle has 2 equal sides for length and 2 equal sides for width. Use this formula:

P = (2 x W) + (2 x L)

Where: **L** means length (longer side of the shape)

**W** means width (shorter side of the side)

P = (2 x W) + (2 x L)

P = (2 x 8 cm) + (2 x 12 cm)
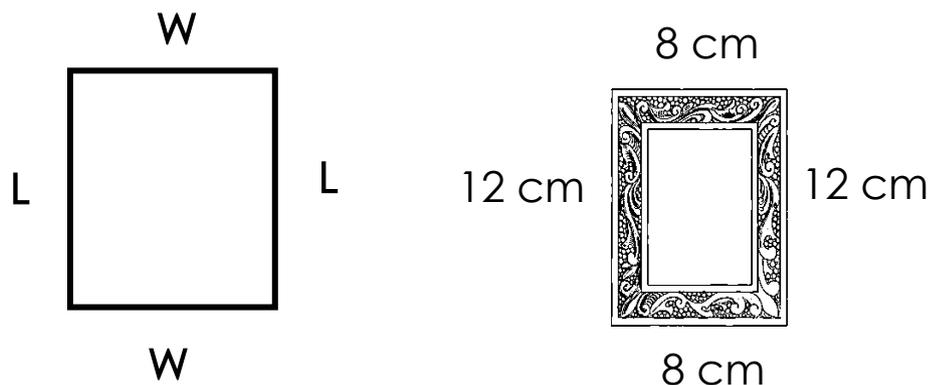
P = 16 cm **+** 24 cm

P = 40 cm

So, the perimeter of the square is **40 cm.**

- To get the perimeter of a **square**, add the lengths of the four sides. Use this formula:

$$P = a + b + c + d$$

```
        b
    ┌───────┐
  a │       │ c
    └───────┘
        d
```

```
        8 cm
    ┌───────┐
 8 cm│       │ 8 cm
    └───────┘
        8 cm
```
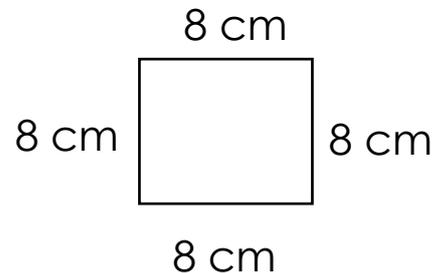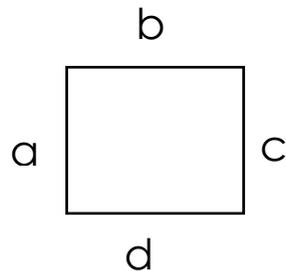
$$P = a + b + c + d$$

$$P = 8 \text{ cm} + 8 \text{ cm} + 8 \text{ cm} + 8 \text{ cm}$$

$$P = 32 \text{ cm}$$

So, the perimeter of the square is **32 cm.**

- Another way to get the perimeter of a **square** is to multiply the measure of one side by 4. Use this formula:

P = 4 x side length

```
        b
    ┌───────┐
  a │       │ c
    └───────┘
        d
```

```
        8 cm
    ┌───────┐
 8 cm│       │ 8 cm
    └───────┘
        8 cm
```
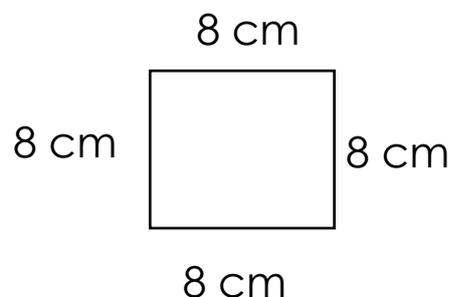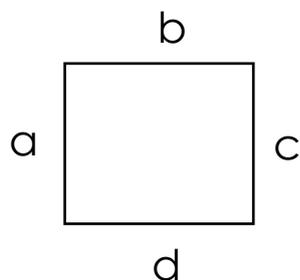
$$P = 4 \text{ x side length}$$

$$P = 4 \text{ x } 8 \text{ cm} = 32 \text{ cm}$$

So, the perimeter of the square is **32 cm.**

- To get the perimeter of a **triangle**, add the lengths of all three sides together. If the sides are labeled as **a**, **b**, and **c**, the formula is:

$P = a + b + c$
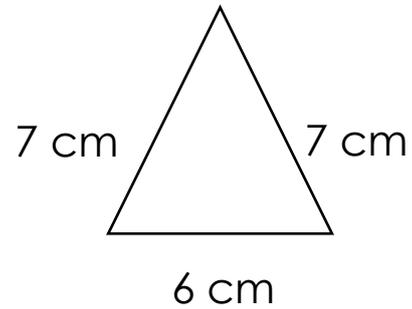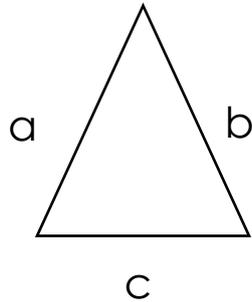
$P = a + b + c$

$P = 7 \text{ cm} + 7 \text{ cm} + 6 \text{ cm}$

$P = 20 \text{ cm}$

So, the perimeter of the triangle is **20 cm.**

![What's More light bulb and book icon]

What's More

Awesome job! Now, let's answer the activity below.

**Directions:** Find the perimeter of each shape. Choose the letter of the correct answer.

1.

10 cm

8 cm   8 cm

10 cm
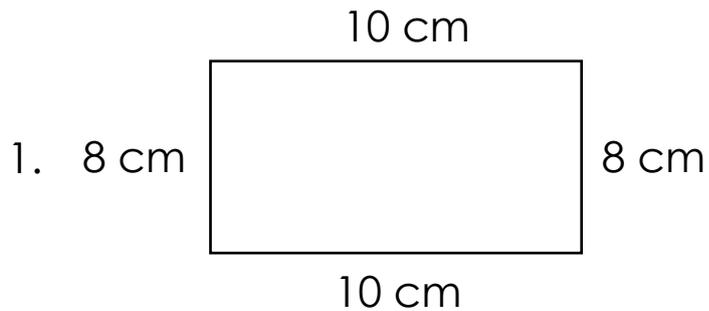
    a. 36 cm
    b. 42 cm
    c. 48 cm
    d. 54 cm

2.

20 cm   20 cm

12 cm
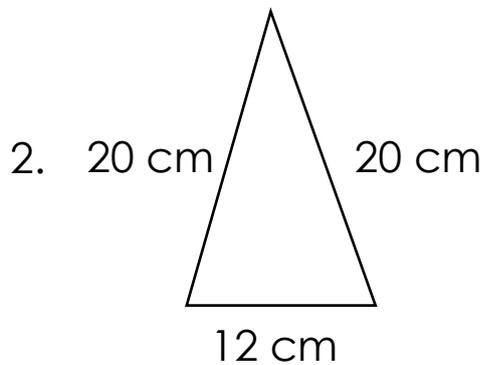
    a. 52 cm
    b. 44 cm
    c. 40 cm
    d. 36 cm

3.

20 cm

20 cm   20 cm

20 cm
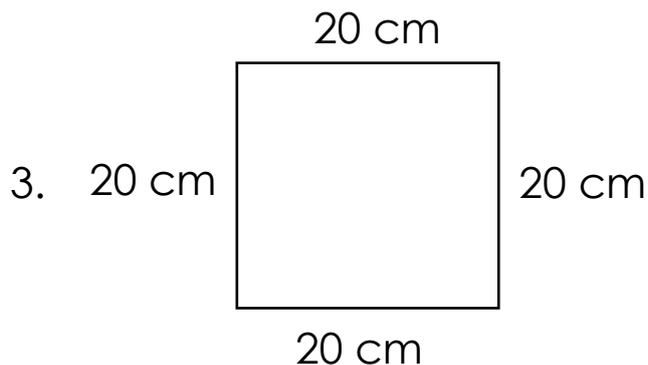
    a. 60 cm
    b. 70 cm
    c. 80 cm
    d. 90 cm

4.

10 cm   12 cm

5 cm
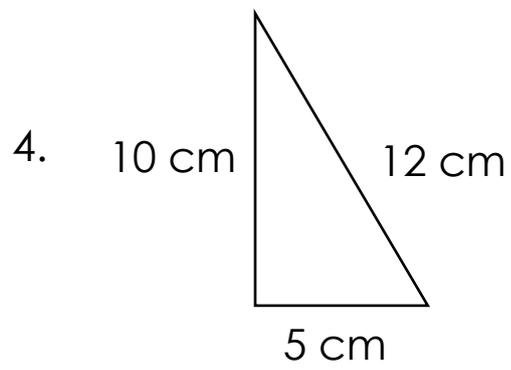
a. 57 cm
b. 47 cm
c. 37 cm
d. 27 cm

12 m

5.   12 m   12 m

12 m
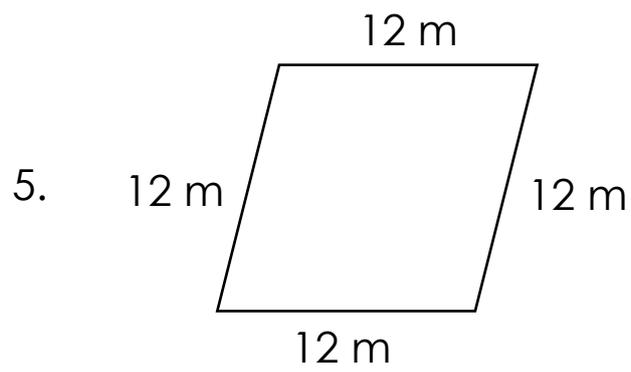
a. 60 cm
b. 54 cm
c. 48 cm
d. 44 cm

🧑 What I have learned

You did it well! Let us see if you understand our lesson. Answer the activity below.

Directions: Read each question and choose the correct answer inside the box.

> P = 4 x side length
>
> P = (W + W) + (L + L)
>
> P = a + b + c

1. What is the formula in finding the perimeter of a **triangle**? _____

2. What is the formula in finding the perimeter of a **square**? _____

3. What is the formula in finding the perimeter of a **rectangle**? _____

![pencil cup icon] **What I can do**

Excellent work! Now, to help you understand our lesson better, answer the activity below.

Directions: Match each shape with its correct perimeter. Write the letter only.

A.

B.

____1.
15 m
15 m [square] 15 m
15 m

a. P = 90 cm

____2.
30 cm
15 cm [rectangle] 15 cm
30 cm

b. P = 60 m

____3.
18 cm [triangle] 18 cm
14 cm

c. P = 50 cm

____4.
25 m [rhombus] 25 m
25 m   25 m
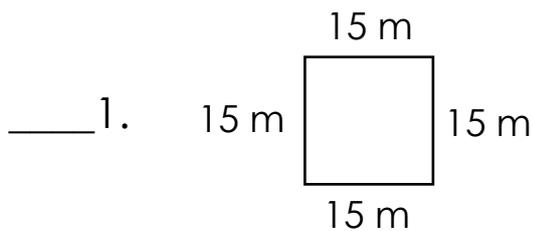
d. P = 120 cm
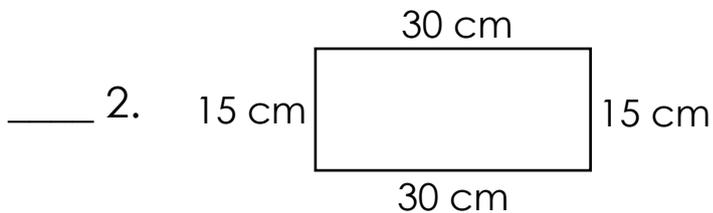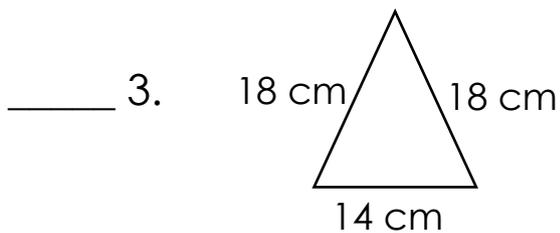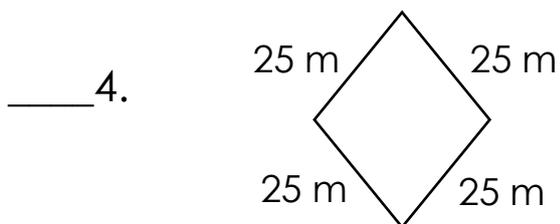
____5.
30 cm
30 cm [parallelogram] 30 cm
30 cm
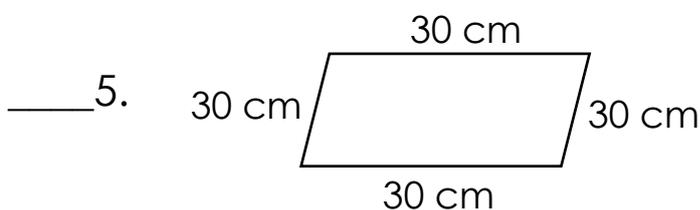
e. P = 100 m

![Assessment icon] **Assessment**

Great job! Now, that you know how to find the perimeter of a square, triangle and rectangle, answer the activity.

Directions: Find the perimeter of the shapes that shown below.

1.

10 m

10 m   [square]   10 m

10 m

P = _____

2.

24 cm

12 cm   [rectangle]   12 cm

24 cm

P = _____

3.   15 m   [triangle]   15 m

10 m

P = _____

4.   15 cm

15 cm

15 cm

15 cm

P = _____

5.

24 cm   24 cm

24 cm   24 cm
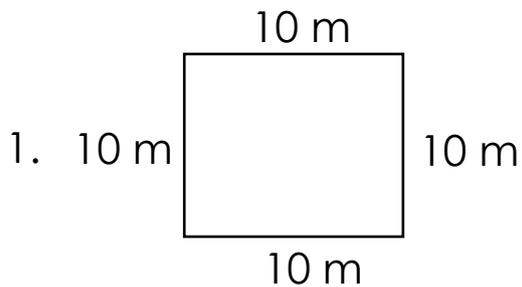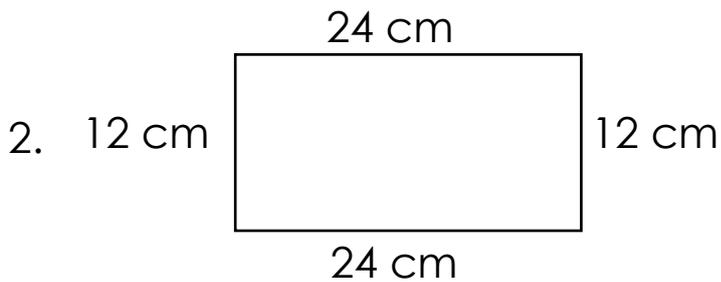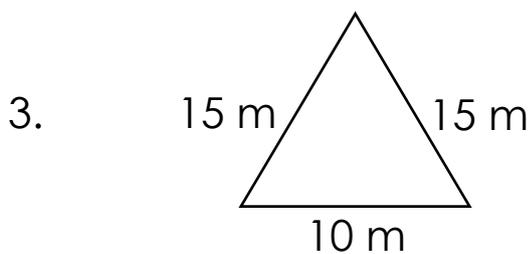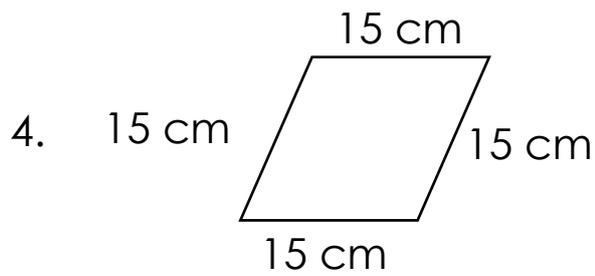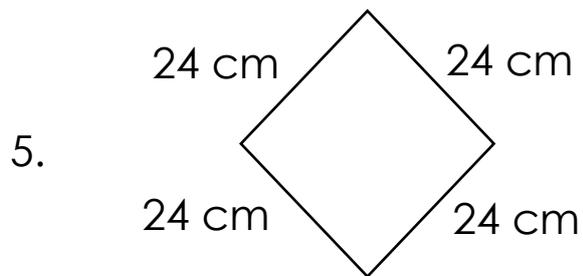
P =_____

Additional Activities

Congratulations on your outstanding performance! To further improve your knowledge, answer the task I have prepared for you.

Directions: Find the perimeter of the shape below.

12 m

6 m

6 m

12 m
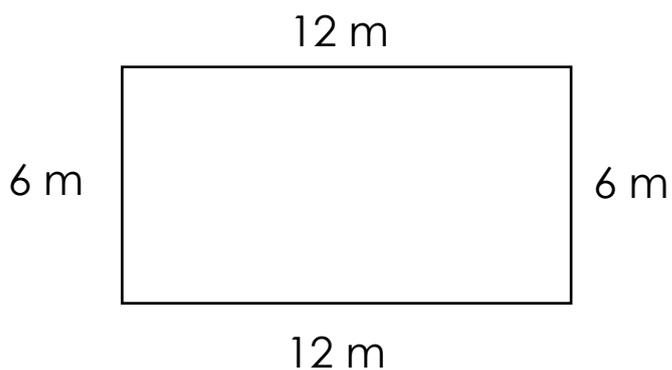
P = _____

Lesson 2 - Solving the Perimeter of Triangles, Squares and Rectangles

 What I Know

Good day kid! We have another lesson to learn today. Are you ready now?

Directions: Read the story problem inside the box and answer the questions below.

> Rita drew in rectangular Cartolina Paper with 25 cm length and 36 cm width. What is the perimeter of the Cartolina Paper?

1. What is asked in the problem?
   a. the area of the Cartolina Paper
   b. the length of the Cartolina Paper
   c. the height of the Cartolina Paper
   d. the perimeter of the Cartolina Paper

2. What are the given numbers?
   a. 25 cm and 63 cm
   b. 36 cm and 52 cm
   c. 25 cm and 36 cm
   d. 57 cm and 72 cm

3. What is the operation to be used?
   a. Division and Addition
   b. Addition and Subtraction
   c. Subtraction and Addition
   d. Multiplication and addition

4. What is the correct number sentence?
   a. P = 2 (10 cm) + 2 (24 cm) = N
   b. P = 2 (15 cm) + 2 (30 cm) = N
   c. P = 2 (25 cm) + 2 (36 cm) = N
   d. P = 2 (35 cm) + 2 (46 cm) = N

5. What is the correct answer?
   a. 60 cm
   b. 82 cm
   c. 102 cm
   d. 122 cm

What's In

Very Good! Let's see if you remember our previous lesson. Answer the activity below.

Directions: Give the perimeter of each shape.

1.   15 cm [square: 15 cm top, 15 cm left, 15 cm right, 15 cm bottom]   P = _____

2.   8 m 12 m 8 m   P = _____
      12 m

3.   6 m 6 m   P = _____
      4 m

4.   4 m 10 m   P = _____
      8 m

5.   20 cm 10 cm 20 cm   P = _____
      10 cm
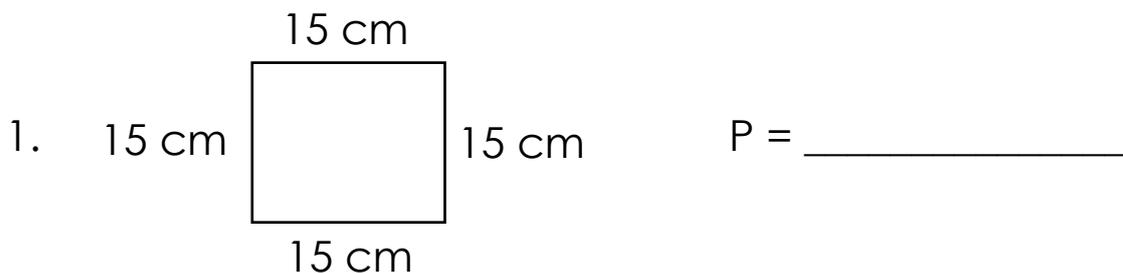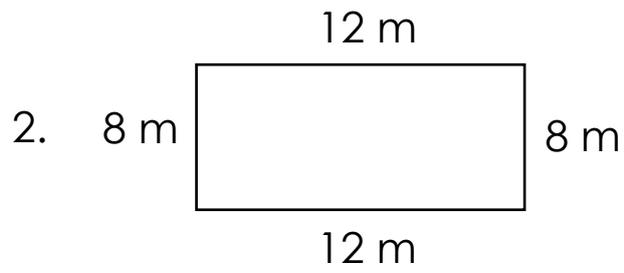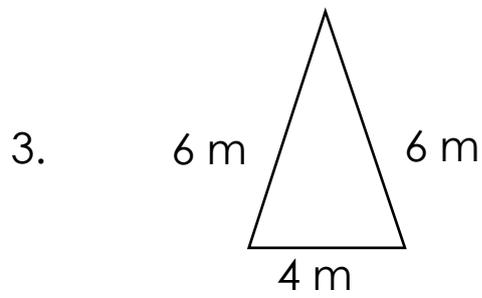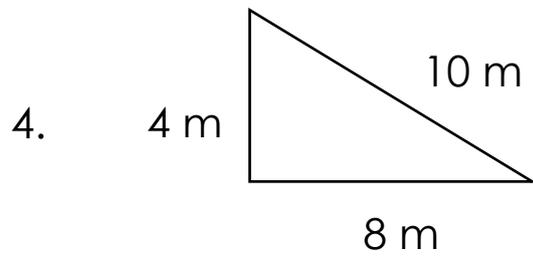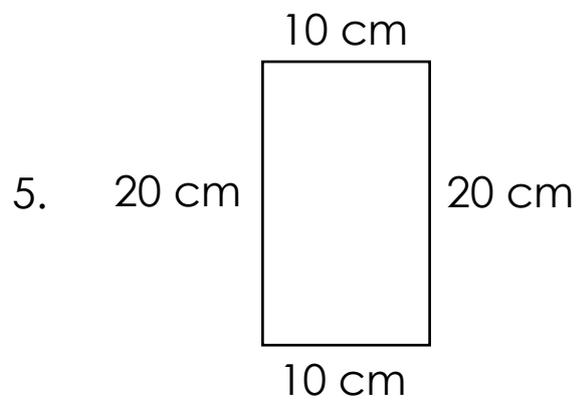
What's New

Fantastic! Are you ready to learn our new lesson? Let's begin!

Directions: Read the problem inside the box and answer the questions.

Mother baked a banana cake in a rectangular tray with 24 cm length and 12 cm width. What is the perimeter of the tray?

1. Who baked a banana cake?   _____

2. Where did mother bake a cake?   _____

3. What is the length of the tray?   _____

4. What is the width of the tray?   _____

What is It

Great job! To fully understand how to solve problem involving perimeter of a square, triangle and rectangle, read and understand the method.

- What will you do to solve the problem?

  ➢ To solve the problem, we must understand the problem.

- How will you answer word problem?

  ➢ In answering word problem, we will use the **Polya's four-step problem solving method.**

  1. **Understand the problem:**

     - What is asked in the problem?

     - What are the given numbers?

  2. **Make a plan:**

     - What is the operation to be used?

     - What is the number sentence?

  3. **Execute the plan:**

     - What is the correct answer?

  4. **Check and Look back:**

     - Check your solution for accuracy.

Now, let's read, analyze and solve the word problem using the Polya's four-step problem solving method.

Mother baked a banana cake in a rectangular tray with 24 cm length and 12 cm width. What is the perimeter of the tray?

1. Understand:

    a. **What is asked in the problem?**
      Answer: The perimeter of the tray

    b. **What are the given numbers?**
      Answer: 24 cm length and 12 cm width

2. Make a plan:

    c. **What is the operation to be used?**
      Answer: Addition

    d. **What is the number sentence?**
      Answer: 2 (24 m) + 2 (12 m) = N

3. Execute the plan:

    e. **What is the correct answer?**

      P = (24 cm + 24 cm) + (12 cm + 12 cm)

      P =   (48 cm)   +   (24 cm)

      P = 72 cm ➡ the perimeter of the tray

4. Check and Look back:

    • Check your solution for accuracy.

![Light bulb over open book icon] **What's More**

Excellent! For more understanding of our lesson, answer the activity below.

Directions: Read the problem and answer the questions. Choose the letter of the correct answer.
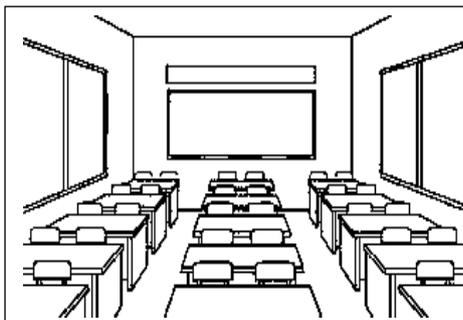
The new classroom has 15 meters length and 10 meters width. What is the perimeter of the classroom?

1. What is asked in the problem?
   a. the perimeter of the classroom.
   b. the perimeter of the kitchen
   c. the perimeter of the school
   d. the perimeter of the church

2. What are the given numbers?
   a. 10 m length
   b. 15 m width
   c. 15 m length and 10m width
   d. 10 m length and 25 m width

3. What is the operation to be used?
   a. Division
   b. Addition
   c. Subtraction
   d. Multiplication

4. What is the number sentence?

    a. 2 (10 m) + 2 (15 m) = N

    b. 2 (14 m) + 2 (12 m) = N

    c. 2 (20 m) + 2 (25 m) = N

    d. 2 (24 m) + 2 (25 m) = N

5. What is the correct answer?

    a. P = 20 m

    b. P = 30 m

    c. P = 40 m

    d. P = 50 m

What I have learned

Great job! Let's see your understanding in solving problem involving perimeter of a square, triangle and rectangle.

Directions: Fill in the blank with the correct answer to complete the sentence.

1. To solve the problem, we must _____ the problem.

2. In answering word problem, we will use the _____ four-step problem solving method.

3. **Understand the problem, Make a plan, Execute the plan** and _____ are the Polya's four step problem solving method.

What I can do

Excellent job! For your more understanding, do the activity.

Directions: Read, analyze and solve the problem.

A handkerchief measures 30 cm long and 25 cm wide. What is the perimeter of the handkerchief?
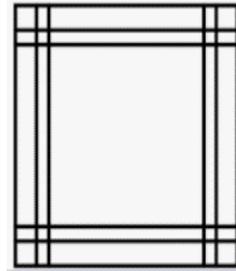
1. What is asked in the problem?

   _____

2. What are the given numbers?

   _____

3. What is the operation to be used?

   _____

4. What is the number sentence?

   _____

5. What is the correct answer?

   _____

Assessment

Great job! Let's check how far is your understanding. Do the activity below.

Directions: Read, analyze and solve the word problem.

> Ana's mother gave her a new laptop. The laptop measures 24 cm length and 10 cm width. What is the perimeter of the laptop?

1. What is asked in the problem?

    _____

2. What are the given numbers?

    _____

3. What is the operation to be used?

    _____

4. What is the number sentence?

    _____

5. What is the correct answer?

   _____

![Additional Activities icon] Additional Activities

Excellent job! To help you improve further in finding the perimeter, do the activity below.

Directions: Read, understand and solve the problem.

> Lino's father wants to build a square sandbox in the backyard. He is going to use wood for the sides. Each side is 15 meters long. What is the perimeter of the wood does he need?

Answer Key

Lesson 1

What I know
1. a
2. c
3. a
4. b
5. b

What's in
1. square
2. triangle
3. rectangle
4. triangle
5. square

What's new
1. picture frame
2. rectangle
3. 12 cm
4. 8cm
5. 40cm

What's more
1. a
2. b
3. c
4. d
5. c

What I have learned
1. P=a + b + c
2. P=4 x side length
3. P= (W + W) + (L + L)

What I can do
1. b
2. a
3. c
4. e
5. d

Assessment
1. 40 m
2. 72 cm
3. 40 m
4. 60 cm
5. 96 cm

Lesson 2

What I know
1. d
2. c
3. a
4. c
5. d

What's in
1. 60 cm
2. 40 m
3. 16 m
4. 22 m
5. 60 cm

What's new
1. mother
2. in a rectangular tray
3. 24 cm
4. 12 cm

What's more
1. a
2. c
3. b
4. a
5. d

What I can do
1. the perimeter of the handkerchief
2. 30 cm long,25 cm wide
3. Addition
4. 2(30cm) + 2(25cm) = N
5. P =110cm

Assessment
1. the perimeter of the laptop
2. 24 cm length,10 cm width
3. Addition
4. 2(24cm) +2 (10cm) =N
5. P = 68cm

References

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DISCLAIMER

This Self-learning Module (SLM) in **MATHEMATICS 2 Quarter 4 Module 8** titled **"Perimeter of Triangles, Squares, and Rectangles"** was developed by SDO Tacurong with the primary objective of preparing for and addressing the demands of the MATATAG Curriculum. Contents of this module were based on DepEd's Learning Competencies anchored on the MATATAG Curriculum. This is a supplementary material to be used by all learners of Tacurong City in all public schools beginning SY 2024-2025. The process of LR development was observed in the production of this module. This is version **1.0**. We highly encourage feedback, comments, and recommendations.