# Determining rectilinear area for 3rd graders Manual

**Determining rectilinear area for 3rd graders** can be a fun and engaging way to introduce young students to the basics of geometry and measurement. Understanding how to find the area of rectilinear shapes?shapes made up of straight lines?helps build a strong foundation in math. This article will guide you through simple methods and activities to teach third graders how to determine the area of various rectilinear shapes, making learning both effective and enjoyable.

## Understanding Rectilinear Shapes

### What Are Rectilinear Shapes?

Rectilinear shapes are figures made up entirely of straight lines. These shapes include rectangles, squares, and more complex figures formed by combining multiple rectangles and squares. They do not have any curved sides.

Examples of rectilinear shapes:

- Squares
- Rectangles
- L-shaped figures
- T-shaped figures
- Complex polygons made of straight sides

### Why Is Knowing the Area Important?

Understanding the area of shapes helps students:

- Measure space in real-world situations
- Develop problem-solving skills
- Prepare for future math concepts like area and perimeter
- Visualize how shapes fit together

## Tools Needed to Determine Area

Before diving into calculations, gather some helpful tools:

- Graph paper
- Ruler or straightedge
- Pencil
- Eraser
- Colored markers (optional for better visualization)

# Basic Concepts of Area

## What Is Area?

Area is the amount of space inside the boundary of a flat shape. It is measured in square units, such as square centimeters ($cm^2$) or square inches ($in^2$).

## Units of Measurement

Encourage students to understand that:

- 1 $unit^2$ = a square that measures 1 by 1 unit
- Larger areas are counted by counting all the small squares within a shape

# How to Determine Rectilinear Area Step-by-Step

## Method 1: Counting Square Units

This is the simplest method for young learners.

Steps:

- Draw the shape on graph paper.
- Count all the full squares inside the shape.
- Count any partially filled squares as needed (combine halves or quarters).
- Sum all the squares to find the total area.

Example Activity:

- Draw an L-shaped figure on graph paper.
- Count how many 1x1 squares fit inside.
- Add partial squares to get the total.

### Method 2: Breaking Down Complex Shapes

For more complex shapes, divide the shape into rectangles or squares to make counting easier.

Steps:

- Identify the simple rectangles within the shape.
- Measure the length and width of each rectangle.
- Calculate the area of each rectangle (length x width).
- Add all the areas together to find the total.

Example:

- An L-shaped figure can be split into two rectangles.
- Find the area of each rectangle separately.
- Sum the areas for the total.

### Method 3: Using Formulas for Regular Shapes

For simple shapes like rectangles and squares, use formulas:

- Square or rectangle: Area = length x width
- For irregular shapes, break them into these figures and add their areas.

## Activities to Teach Rectilinear Area

### Activity 1: Shape Sorting and Counting

- Provide various rectilinear shapes drawn on grid paper.
- Have students classify shapes and count the squares inside.
- Encourage them to explain their counting process.

### Activity 2: Build Your Own Shape

- Using grid paper, students can create their own rectilinear shapes.
- Then, they can determine the area by counting squares or breaking shapes into rectangles.

### Activity 3: Real-World Measurement

- Measure the classroom or a tablecloth using graph paper.
- Calculate the area of these objects to connect math to real life.

## Tips for Teaching Rectilinear Area to 3rd Graders

- Use visual aids and hands-on activities.
- Reinforce counting squares and breaking shapes into manageable parts.
- Relate shapes to everyday objects (e.g., tiles, books, tables).
- Use colorful markers to distinguish different parts of complex shapes.
- Encourage students to explain their reasoning to develop understanding.

## Common Challenges and How to Overcome Them

- Confusion with partial squares: Teach students to combine halves or quarters for accurate counting.
- Difficulty breaking shapes into rectangles: Use guided practice with simple shapes before progressing.
- Miscounting squares: Use color coding for each counted square to ensure accuracy.

## Summary: Key Points for Determining Rectilinear Area

- Rectilinear shapes are made of straight lines.
- Area is the space inside the shape, measured in square units.
- Counting squares on graph paper is the easiest method for young learners.
- Breaking complex shapes into rectangles simplifies calculation.
- Using formulas for regular shapes accelerates the process.
- Hands-on activities and visual aids make learning engaging.

## Additional Resources and Practice Ideas

- Printable worksheets with rectilinear shapes.

- Online interactive games for area measurement.
- Shape-building blocks for tactile learning.
- Classroom challenges to find the area of objects around the school.

## Conclusion

Determining rectilinear area for 3rd graders is an essential step in building a strong understanding of geometry and measurement. By combining hands-on activities, visual aids, and simple calculations, teachers can make this topic accessible and fun for young students. Remember to keep lessons interactive and relate concepts to real-world objects to help students grasp the idea of space and measurement effectively. With practice and patience, third graders can master the basics of calculating the area of rectilinear shapes and develop a lifelong appreciation for math.

Rectilinear Area: Unlocking the Secrets of Flat Surfaces for 3rd Graders

Understanding how to find the area of a rectangle or other flat shapes might seem tricky at first, but with the right approach and a little practice, 3rd graders can become confident in measuring and calculating rectilinear areas. Think of it as a fun puzzle?learning to measure the size of a surface! In this article, we explore what rectilinear area is, how to determine it, and the best ways to help young learners grasp this important math concept.

## What Is Rectilinear Area? A Clear Explanation

Rectilinear area refers to the amount of space covered by a flat surface that has straight sides?think of rectangles, squares, or any shape made up of straight lines. The term "rectilinear" comes from "recti" meaning straight and "linear" meaning lines. When we talk about the area of such shapes, we're measuring how much space they take up on a flat surface like a piece of paper or a floor tile.

Why is understanding rectilinear area important? Because it helps us in real life?like figuring out how much paint you need to cover a wall, or how much carpet fits into a room. For 3rd graders, learning to determine rectilinear area builds a foundation for more advanced math concepts later on.

## How to Determine Rectilinear Area: Step-by-Step Guide for 3rd Graders

Understanding how to find the area of rectilinear shapes involves a few key steps. Let?s explore each carefully, making it easy and fun!

### Step 1: Recognize the Shape

Before calculating, identify the shape you're working with. Is it a rectangle? Square? Or a more

complex shape made up of rectangles? Recognizing the shape helps determine the best method to measure its area.

- Square: All sides are equal.
- Rectangle: Opposite sides are equal, and all angles are right angles.
- Other rectilinear shapes: Can be broken into rectangles for easier measurement.

## Step 2: Measure the Lengths of Sides

Use a ruler or measuring tape to find the length of each side. Remember:

- Always measure in the same unit?centimeters (cm), inches, or meters.
- Write down each measurement clearly.
- For irregular shapes, divide the shape into smaller rectangles or squares first.

## Step 3: Use the Area Formula

The most common formula for rectilinear shapes like rectangles and squares is:

Area = Length × Width

This means multiplying the length of the shape by its width.

Example:

If a rectangle has a length of 6 cm and a width of 4 cm, then:

Area = 6 cm × 4 cm = 24 square centimeters (cm²).

## Step 4: For Complex Shapes, Break Them Down

Some shapes might look complicated but can be divided into smaller rectangles or squares:

- Draw lines inside the shape to split it into smaller, easier parts.
- Find the area of each smaller part.
- Add all these areas together to find the total.

Example:

Imagine a shape that looks like an ?L.? Divide it into two rectangles, find each area, then add them.

### Step 5: Count the Square Units

For very simple shapes like squares or rectangles drawn on graph paper:

- Count how many small squares cover the shape.
- Each small square might be 1 cm by 1 cm.
- The total number of small squares equals the area.

This is a visual way that helps young students understand what area really means.

## Tools and Tips for Young Learners

Helping 3rd graders understand rectilinear area can be more engaging with the right tools and strategies.

### Tools to Use

- Rulers and measuring tapes: To measure side lengths accurately.
- Graph paper: Helps in counting squares and visualizing areas.
- Colored pencils: To highlight different parts of complex shapes.
- Manipulatives: Building blocks or cut-outs to physically explore shapes.

### Tips for Teachers and Parents

- Use real-world examples: Measure the classroom door, a notebook cover, or a game board.
- Make it hands-on: Let kids measure and then calculate.
- Visual aids: Draw shapes and divide them into smaller sections.
- Practice with games: Bingo with area calculations or puzzles.

## Common Mistakes to Avoid and How to Correct Them

Even experienced learners might make some errors when calculating rectilinear area. Here?s what to watch out for:

- Mixing units: Always keep measurements in the same units.

- Forgetting to multiply: Remember, area of a rectangle is length times width, not just length or width alone.
- Ignoring irregular shapes: Break them into smaller rectangles first.
- Miscounting squares: Double-check counts, especially on graph paper.

Tip: Encourage students to review their work and verify calculations by estimating or reverse calculation.

## Practical Activities to Reinforce Learning

Learning about rectilinear area becomes more meaningful when kids get to practice actively. Here are some engaging activities:

- Shape Scavenger Hunt: Find objects around the house or classroom that are rectangles or squares. Measure and find their area.
- Design Your Room: Draw a simple floor plan and calculate the area of different sections.
- Create Art with Shapes: Use cut-outs to build images, then calculate their total area.
- Measure and Compare: Measure different objects and compare their areas to understand size differences.

## Real-Life Applications for 3rd Graders

Understanding rectilinear area isn't just a classroom activity; it?s useful in everyday life.

- Decorating: Knowing how much wallpaper or paint is needed.
- Cooking: Estimating the size of baking trays or pans.
- Gardening: Planning the area of flower beds or vegetable patches.
- Crafts: Cutting fabric or paper to specific sizes.

## Summary: Making Area Learning Fun and Effective

Teaching 3rd graders to determine rectilinear area involves a blend of measurement skills, visualization, and simple multiplication. By breaking shapes into manageable parts, using hands-on tools, and relating concepts to real life, young learners can develop a strong understanding of how to find the area of flat, straight-sided shapes.

Remember, patience and practice are key. Celebrate each small success as students learn to measure, divide, and add their way to mastering rectilinear area. With these strategies, even the most complex-looking shapes become approachable puzzles, setting a solid foundation for future

math skills.

Empower the next generation of mathematicians by making learning about rectilinear area engaging, practical, and fun!

QuestionAnswer What does rectilinear mean? Rectilinear means made up of straight lines. So, a rectilinear shape has straight sides. How do we find the area of a rectilinear shape? We find the area by counting how many square units fit inside the shape. Can I use a ruler to help measure a rectilinear shape? Yes! Using a ruler helps you measure each side so you can find the area more accurately. What is a simple way to find the area of a rectangle? Multiply the length by the width. For example, if a rectangle is 4 units long and 3 units wide, the area is 4 times 3, which is 12 square units. Why is it important to understand rectilinear shapes? Understanding rectilinear shapes helps us learn about shapes around us and how to find their area. Can irregular shapes have their area found like rectangles? Yes, but we might need to break the irregular shape into smaller rectangles or squares first and then add their areas together. What tools can I use to find the area of a rectilinear shape? You can use graph paper, a ruler, or a grid to help count squares and find the area. Is it harder to find the area of a shape with many sides? It can be a bit more complex, but breaking the shape into smaller rectangles or squares makes it easier to find the total area.

**Related keywords:** rectilinear shapes, area calculation, basic geometry, perimeter, simple shapes, counting units, length measurement, school geometry, area formula, shape recognition

# WORD PROBLEMS AREA OF RECTANGLE SQUARE PARALLELOGRAM

**Word problems area of rectangle square parallelogram**

Understanding the area of various geometric shapes is fundamental in mathematics, especially when solving real-world problems. Among these shapes, rectangles, squares, and parallelograms are common, and their area calculations form the basis for many word problems encountered in academic and practical settings. Mastering how to approach, interpret, and solve word problems involving these shapes' areas enhances problem-solving skills and mathematical reasoning. This comprehensive guide aims to explore the area concepts for rectangles, squares, and parallelograms through detailed explanations, strategies for solving word problems, and practical examples.

## Understanding Basic Concepts of Area

### What is Area?

Area refers to the amount of surface covered by a two-dimensional shape. It is measured in square units such as square centimeters ($cm^2$), square meters ($m^2$), or square inches ($in^2$). Calculating the area allows us to determine how much space a shape occupies.

### Importance of Area in Real Life

Understanding area calculations helps in various fields such as:

- Architecture and construction (flooring, wall painting)
- Agriculture (farming land measurement)
- Interior design (carpet or tile coverage)
- Art and design (canvas or paper sizes)

## Area of Basic Shapes: Rectangles, Squares, and Parallelograms

### Rectangle

- Formula: Area = length × width
- Properties: Opposite sides are equal, and angles are right angles.
- Notation: If length = L and width = W, then Area = L × W.

### Square

- Formula: Area = side × side = $side^2$
- Properties: All sides are equal, and angles are right angles.
- Note: The square is a special case of a rectangle.

### Parallelogram

- Formula: Area = base × height
- Properties: Opposite sides are equal and parallel; angles are not necessarily right angles.
- Note: The height is the perpendicular distance between the bases.

## Approach to Solving Word Problems on Area

Solving word problems involving areas requires a systematic approach:

- Read the problem carefully to understand what is given and what is asked.
- Identify the shape involved and recall the relevant formula.
- Extract numerical data and assign variables if needed.
- Determine the missing dimensions (length, width, height, base, etc.).
- Apply the area formula correctly.
- Perform calculations step-by-step.
- Check your answer in the context of the problem.

# Strategies for Solving Word Problems

## Step-by-Step Problem-Solving Techniques

- Visualize the problem: Draw diagrams or sketches to understand the shape and dimensions.
- Label all given data: Mark known measurements and unknowns clearly.
- Translate words into mathematical expressions: Convert phrases into equations using the formulas.
- Use units consistently: Convert all measurements to the same unit before calculations.
- Estimate before exact calculation: For complex problems, rough estimates can guide your approach.
- Verify the answer: Ensure the solution makes sense logically and contextually.

## Common Pitfalls to Avoid

- Confusing perimeter with area.
- Using incorrect formulas for the shape.
- Forgetting to convert units.
- Misreading the problem's data.
- Ignoring the need for perpendicular height in parallelogram problems.

# Sample Word Problems and Solutions

## Problem 1: Area of a Rectangle

Question: A rectangle has a length of 12 meters and a width of 5 meters. Find its area.

Solution:

- Step 1: Identify given data: Length = 12 m, Width = 5 m.

- Step 2: Recall formula: Area = length × width.
- Step 3: Calculate: Area = 12 × 5 = 60 m².
- Answer: The rectangle's area is 60 square meters.

## Problem 2: Area of a Square

Question: A square garden has a side length of 8 meters. What is the area?

Solution:

- Step 1: Given: Side = 8 m.
- Step 2: Formula: Area = side².
- Step 3: Calculation: 8² = 64 m².
- Answer: The garden covers 64 square meters.

## Problem 3: Area of a Parallelogram

Question: A parallelogram has a base of 15 meters and a height of 6 meters. Find its area.

Solution:

- Step 1: Given: Base = 15 m, Height = 6 m.
- Step 2: Formula: Area = base × height.
- Step 3: Calculation: 15 × 6 = 90 m².
- Answer: The parallelogram's area is 90 square meters.

## Problem 4: Word Problem Combining Shapes

Question: A rectangular park measures 200 meters in length and 150 meters in width. A square playground of side length 30 meters is within the park. Find the area of the remaining part of the park after excluding the playground.

Solution:

- Step 1: Calculate park area: 200 × 150 = 30,000 m².
- Step 2: Calculate playground area: 30² = 900 m².
- Step 3: Subtract playground area from park area: 30,000 - 900 = 29,100 m².
- Answer: The remaining area of the park is 29,100 square meters.

# Advanced Word Problems and Applications

## Problem 5: Multiple Shapes in a Real-World Context

A farmer has a rectangular field measuring 500 meters by 300 meters. Within it, there is a parallelogram-shaped pond with a base of 100 meters and a height of 40 meters. Find the area of the field that is not occupied by the pond.

Solution:

- Step 1: Calculate total field area: 500 × 300 = 150,000 m².
- Step 2: Calculate pond area: 100 × 40 = 4,000 m².
- Step 3: Subtract pond area from total field: 150,000 - 4,000 = 146,000 m².
- Answer: The area of the field excluding the pond is 146,000 square meters.

## Problem 6: Applying Area in Construction

A construction company needs to lay tiles on a square kitchen floor of side length 9 meters. If each tile covers 0.25 m², how many tiles are needed to cover the entire floor?

Solution:

- Step 1: Calculate floor area: $9^2$ = 81 m².
- Step 2: Determine number of tiles: 81 ÷ 0.25 = 324 tiles.
- Answer: 324 tiles are required to cover the floor.

# Additional Tips for Mastering Word Problems on Area

- Practice regularly: The more problems you solve, the better you understand different scenarios.
- Use diagrams: Visual representation helps in understanding complex problems.
- Understand the context: Real-world problems often contain clues that guide your calculations.
- Check units and conversions: Mistakes often occur due to incorrect units.
- Review formulas: Be sure about the formulas for different shapes and their conditions.

# Conclusion

Mastering the area of rectangles, squares, and parallelograms through word problems enhances your mathematical skills and prepares you for tackling real-life situations involving space and

measurements. Remember to approach each problem methodically, visualize the shapes involved, and apply the correct formulas. With consistent practice and attention to detail, solving word problems related to the area of these shapes becomes intuitive and rewarding. By understanding these fundamental concepts, you develop a strong foundation for more advanced geometry and problem-solving tasks.

Word Problems in Area of Rectangle, Square, and Parallelogram: A Comprehensive Guide

Understanding how to solve word problems related to the area of rectangles, squares, and parallelograms is a fundamental skill in geometry that combines conceptual understanding with practical problem-solving. These problems are often encountered in academic assessments and real-life scenarios, making mastery in this area essential for students and enthusiasts alike. This comprehensive guide delves into the various aspects of word problems involving the areas of these quadrilaterals, offering detailed explanations, strategies, and examples to enhance your problem-solving toolkit.

## Introduction to Area in Quadrilaterals

Before diving into specific word problems, it?s crucial to understand what area signifies in the context of rectangles, squares, and parallelograms.

What is Area?

- Definition: Area refers to the amount of surface covered by a two-dimensional shape. It is measured in square units (e.g., square meters, square centimeters).
- Significance: Knowing the area helps in tasks such as flooring, painting, land measurement, and design.

General Formulas

- Rectangle: $\text{Area} = \text{length} \times \text{breadth}$
- Square: $\text{Area} = \text{side}^2$
- Parallelogram: $\text{Area} = \text{base} \times \text{height}$

Note: For parallelograms, the height is perpendicular to the base, which is a key aspect in solving problems.

## Understanding Word Problems: Key Concepts and Strategies

Word problems require translating real-world language into mathematical expressions. Here's a structured approach:

Step-by-Step Problem-Solving Strategy

- Read Carefully: Understand what is being asked. Identify the given data and what you need to find.
- Identify the Shape: Recognize whether the problem involves a rectangle, square, or parallelogram.
- Highlight Known Values: Mark the given dimensions, areas, or other relevant information.
- Determine Unknowns: Decide which dimensions or measurements need to be calculated.
- Choose the Correct Formula: Select the appropriate area formula based on the shape.
- Set Up Equations: Translate the problem into mathematical equations.
- Solve the Equations: Perform calculations step-by-step.
- Check Units and Reasonableness: Make sure the units are consistent and the answer makes sense in context.
- Answer in Context: Write the final answer with appropriate units and interpret it if necessary.

## Word Problems Involving Rectangles

Rectangles are the most straightforward among these shapes, and their word problems often involve calculating area based on given dimensions or vice versa.

Common Types of Rectangular Area Problems

- Finding the area given length and breadth
- Finding missing dimensions when the area and one dimension are known
- Determining the length or breadth when the area and other dimension are known

Sample Problems and Solutions

Problem 1: A rectangle has a length of 12 meters and a breadth of 5 meters. Find its area.

Solution:

- Use the formula: $\text{Area} = \text{length} \times \text{breadth}$
- $\text{Area} = 12 \times 5 = 60$ square meters

Problem 2: The area of a rectangle is 84 square meters, and its length is 12 meters. Find its breadth.

Solution:

- Rearrange the formula: $\text{breadth} = \frac{\text{Area}}{\text{length}}$
- $\text{breadth} = \frac{84}{12} = 7$ meters

Real-Life Application

- Calculating the area of a garden with given dimensions.
- Determining the amount of material needed for a rectangular tablecloth.

## Word Problems Involving Squares

Squares are special rectangles with all sides equal. Their word problems often involve the side length or the area, with the relationship $\text{Area} = \text{side}^2$.

Common Types of Square Area Problems

- Finding area when side length is known
- Finding side length when area is given
- Application in tiling, fencing, and design

Sample Problems and Solutions

Problem 3: The side of a square playground is 20 meters. Find its area.

Solution:

- Use $\text{Area} = \text{side}^2$
- $\text{Area} = 20^2 = 400$ square meters

Problem 4: A square piece of land has an area of 256 square meters. Find the length of one side.

Solution:

- $\text{side} = \sqrt{\text{area}}$
- $\text{side} = \sqrt{256} = 16$ meters

Practical Applications

- Calculating the amount of paint needed to cover a square wall.
- Determining the size of tiles required for a square floor.

## Word Problems Involving Parallelograms

Parallelograms have a more complex area formula involving base and height. Their word problems often include scenarios where height is not directly given, requiring the use of auxiliary data or geometric reasoning.

Common Types of Parallelogram Area Problems

- Calculating area when base and height are known
- Finding missing height or base when the area and other dimensions are given
- Using diagonal and side lengths to find area

Key Concepts for Parallelogram Problems

- The height is perpendicular to the base, not necessarily the side length.
- Sometimes, the problem involves the use of other properties, such as diagonals or angles.

Sample Problems and Solutions

Problem 5: A parallelogram has a base of 15 meters and a height of 8 meters. Find its area.

Solution:

- $\text{Area} = \text{base} \times \text{height}$
- $\text{Area} = 15 \times 8 = 120$ square meters

Problem 6: The area of a parallelogram is 180 square meters, and the base length is 12 meters. Find the height.

Solution:

- $\text{height} = \frac{\text{Area}}{\text{base}}$
- $\text{height} = \frac{180}{12} = 15$ meters

Problem 7: In a parallelogram, if the side length is 10 meters and the height is 6 meters, what is the area? (Assume the side length is the base.)

Solution:

- $\text{Area} = \text{base} \times \text{height} = 10 \times 6 = 60$ square meters

Complex Application Problems

- Using diagonals to find the area when height is unknown.
- Estimating land area from irregular measurements involving parallelogram-shaped plots.

## Advanced Word Problems and Real-World Applications

Real-life scenarios often involve combining multiple shapes and dimensions, requiring critical thinking and multi-step calculations.

Examples of Complex Word Problems

Example 1: A rectangular garden measures 50 meters in length and 30 meters in width. A path of uniform width surrounds the garden, increasing its total area to 2,500 square meters. Find the width of the path.

Solution Approach:

- Let $w$ be the width of the path.
- Total dimensions including the path: $(50 + 2w)$ and $(30 + 2w)$.
- Set up the equation: $(50 + 2w)(30 + 2w) = 2500$.
- Expand and solve the quadratic:

$$

(50 + 2w)(30 + 2w) = 2500

\]

\[

1500 + 100w + 60w + 4w^2 = 2500

\]

\[

4w^2 + 160w + 1500 = 2500

\]

\[

4w^2 + 160w - 1000 = 0

\]

- Divide through by 4:

\[

w^2 + 40w - 250 = 0

\]

- Use quadratic formula:

\[

w = \frac{-40 \pm \sqrt{40^2 - 4 \times 1 \times (-250)}}{2}

\]

\[

$$w = \frac{-40 \pm \sqrt{1600 + 1000}}{2} = \frac{-40 \pm \sqrt{2600}}{2}$$

- Approximate:

$$\sqrt{2600} \approx 50.99$$

- Possible solutions:

$$w = \frac{-40 + 50.99}{2} \approx \frac{10.99}{2} \approx 5.495$$

$$w = \frac{-40 - 50.99}{2} \approx \frac{-90.99}{2}$$

QuestionAnswer How do you find the area of a rectangle with length 8 meters and width 5 meters? Multiply the length by the width: 8 × 5 = 40 square meters. A square has a perimeter of 36 meters. What is its area? First, find the side length: 36 ÷ 4 = 9 meters. Then, area = 9 × 9 = 81 square meters. If the base of a parallelogram is 10 cm and the height is 7 cm, what is its area? Area = base × height = 10 × 7 = 70 square centimeters. A rectangle's length is twice its width. If the area is 48 square meters, what are the dimensions? Let width = w, then length = 2w. Area = w × 2w = 2w² = 48. So, w² = 24, w ? 4.9 meters. Length ? 9.8 meters. How do you determine the area of a parallelogram given the diagonals and the angle between them? Use the formula: Area = ½ × d? × d? × sin(angle between diagonals). What is the area of a square with a diagonal length of 10?2 cm? Diagonal = s?2, so s = diagonal / ?2 = 10?2 / ?2 = 10 cm. Area = s² = 10 × 10 = 100 square centimeters. A rectangle has a length of 15 meters and an area of 150 square meters. What is its width? Width = area ÷ length = 150 ÷ 15 = 10 meters. How do you find the area of a rhombus if you know the lengths of its diagonals? Area = ½ × d? × d?, where d? and d? are the diagonals. In a parallelogram, if the base is 12 cm and the height is 9 cm, what is its area? Area = base × height = 12 × 9 = 108 square centimeters.

**Related keywords:** area calculation, perimeter, geometry, shape problems, algebra, rectangles, squares, parallelograms, formulas, math exercises

**Read the full article online:** WORD PROBLEMS AREA OF RECTANGLE SQUARE PARALLELOGRAM