

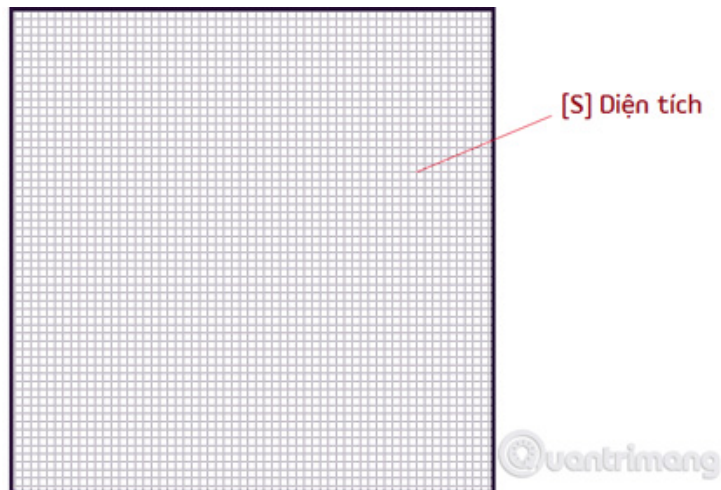
Area of a square, Perimeter of a square: Formulas and illustrative examples.

The area of a square is equal to the square of the length of its side. The area of a square is the size of its surface, which is the visible part of the square.

The formulas for calculating the area and perimeter of a square are extremely important and frequently used in both studies and daily life. This article will introduce you to the formulas for calculating the area and perimeter of a square; please refer to them.

1. Formula for calculating the area of a square

The area of a square is measured by the size of its surface, which is the visible, flat part of the square. To calculate the area of a square, you need to know the length of its side.



Square area formula

The area of a square is equal to the side of the square multiplied by itself or the square of the length of the side of the square.

Picture 2 of Area of a square, Perimeter of a square: Formulas and illustrative examples.

In there:

1. S is the area of the square.
2. a is the length of the sides of the square.
3. Note: The unit of area measurement will be written in the form of a power of 2 (2), read as " *unit name + square* ". For example: m^2 (square meter), cm^2 (square centimeter).

Example : To calculate the area of a square with a side of 6cm, you take $6 \times 6 = 36cm^2$.

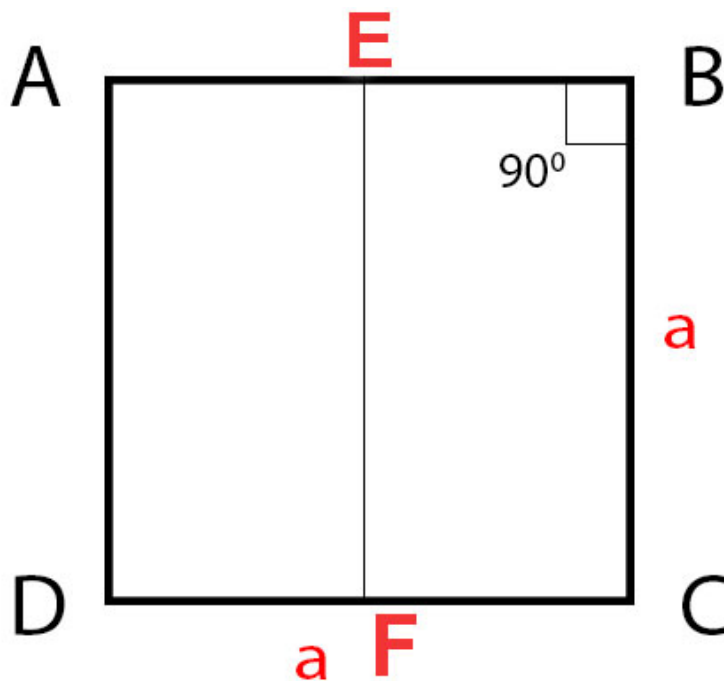
Some other simple ways to calculate the area of a square.

1. The area of a square is equal to the sum of the areas of two isosceles right triangles.

Picture 3 of Area of a square, Perimeter of a square: Formulas and illustrative examples.

1. The area of the square is equal to the sum of the areas of the two rectangles.

Picture 4 of Area of a square, Perimeter of a square: Formulas and illustrative examples.

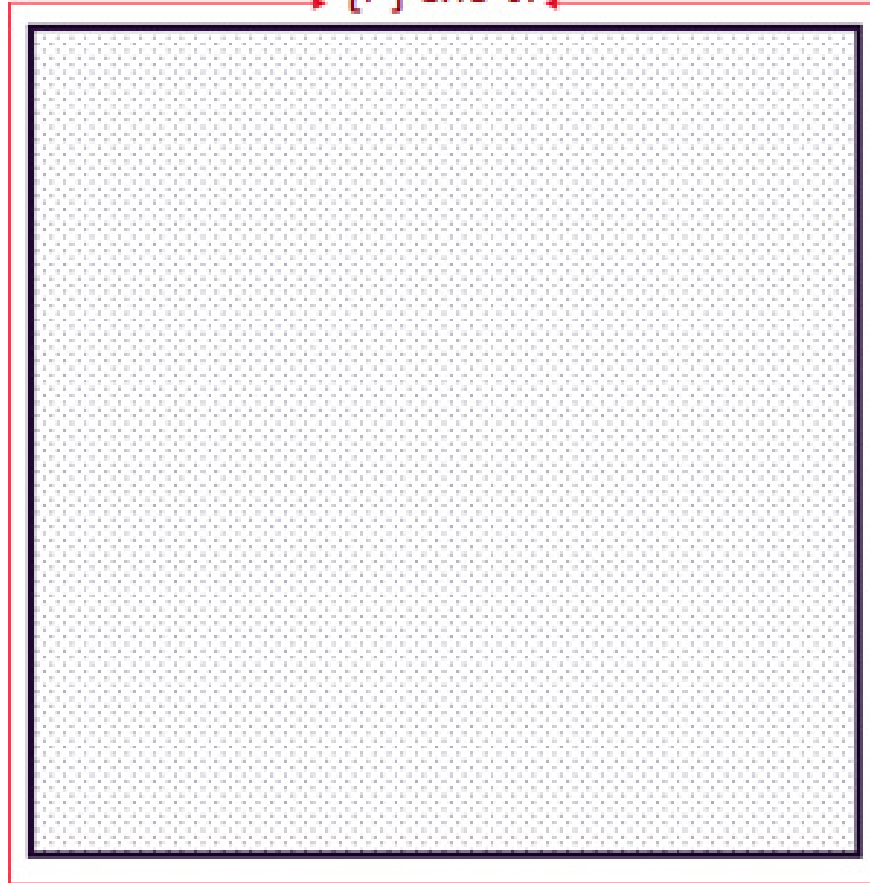


1. Formulas for calculating the diagonal of a square and the diagonal of a rectangle.

2. Formula for calculating the perimeter of a square

The perimeter of a square is the sum of the lengths of the sides that enclose it, which is also the perimeter of its entire area. To calculate the perimeter of a square, you need to know the length of its sides.

Formula for the perimeter of a square



The perimeter of a square is calculated using the formula: 4 times the length of its sides.

Picture 7 of Area of a square, Perimeter of a square: Formulas and illustrative examples.

In there:

1. P is the perimeter of the square.
2. a is the length of the sides of the square.

For example : if the side length of a square is 6cm, then the perimeter of that square will be $4 \times 6\text{cm} = 24\text{cm}$.

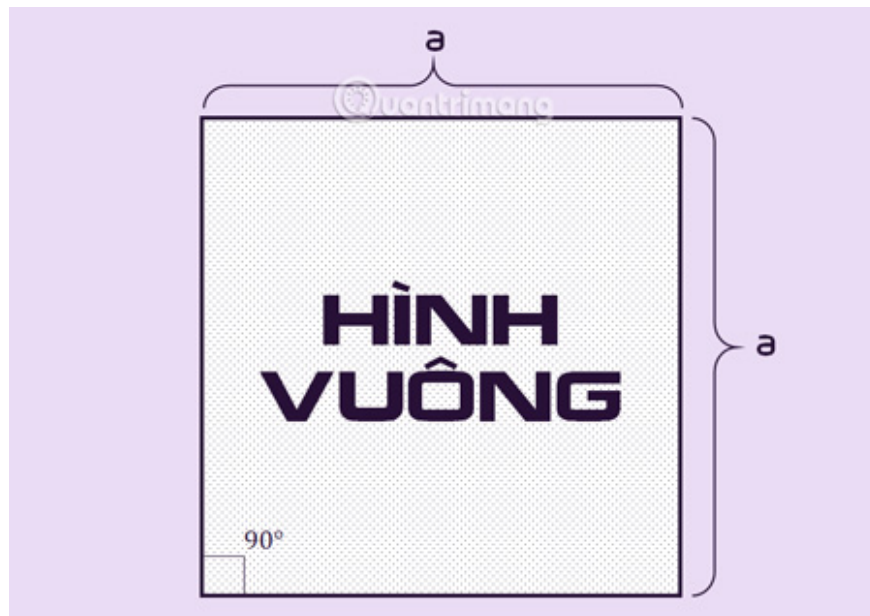
Poem for calculating the area and perimeter of a square:

To calculate the area of a square, multiply the side by itself; this is the usual method.

The perimeter is calculated like this:
one side multiplied by 4, that's correct.

3. What is a square?

A **square** is a regular quadrilateral with four equal sides and four equal angles. A square has four right angles, diagonals that are perpendicular at their midpoints, and two pairs of opposite sides that are parallel to each other.



A square can be considered a rectangle with equal sides, or a rhombus with two equal diagonals.

4. Exercises on calculating the area and perimeter of a square.

Lesson 1 :

The square ABCD has a side length of 4 cm. Calculate the area of the square ABCD?

Prize:

To calculate the area of square ABCD, we can use the formula: $S = axa$, where a is the length of the side of the square.

Given a square ABCD, $a = 4$ cm. Therefore, the area of the square ABCD is:

$$S = axa = 4 \times 4 = 16 \text{ cm}^2 .$$

The final answer is: 16 cm^2 .

Lesson 2 :

Given a square ABCD with a perimeter of 28cm. Calculate the area of square ABCD.

Prize:

$$P = 4 \times a \Rightarrow \text{The side length of square ABCD is: } a = 28 : 4 = 7 \text{ cm}$$

The area of square ABCD is: $S = 7 \times 7 = 49 \text{ cm}^2$

Lesson 3 :

A square plot of land is extended by 5cm on one side, resulting in a rectangular perimeter of 110cm. Calculate the area of the land after the extension.

Prize:

The perimeter of the square plot of land is: $110 - 5 \times 2 = 100 \text{ cm}$

The side of the square plot of land (which is also the width of the rectangle) is: $100 : 4 = 25 \text{ cm}$

The length of the rectangular plot of land is: $25 + 5 = 30 \text{ cm}$

After expansion, the land area is $25 \times 30 = 750 \text{ cm}^2$.

Problem 4:

A square garden has sides of 20 m. A 2 m wide path is built around the garden, within the garden's land. The remaining land is used for cultivation. Calculate the cultivated area of the garden.

Prize

The remaining area for cultivation is a square with sides of: $20 - 2 - 2 = 16 \text{ (m)}$

The cultivated area of the garden is: $16 \times 16 = 256 \text{ (m}^2 \text{)}$

So the cultivated area of the garden is 256 m^2 .

Exercise 5:

Calculate the perimeter of a square knowing that its area is 36 cm^2 .

Prize

We have $6 \times 6 = 36$, so the side length of the square is 6 cm.

The perimeter of the square is:

$6 \times 4 = 24 \text{ (cm)}$

Answer: 24 cm.

Lesson 6.

A square has an area of 144 cm^2 . Calculate the perimeter of that square.

Prize

We have: $12 \times 12 = 144$, so the side length of the square is 12 cm.

The perimeter of that square is:

$$12 \times 4 = 48 \text{ (cm)}$$

Answer: 48 cm.

Lesson 7.

A square has a perimeter of 320 cm. A rectangle has a length of 95 cm and a width equal to the side of the square. Calculate the perimeter of the rectangle.

Prize

The side length of the square is:

$$320 : 4 = 80 \text{ (cm)}$$

The perimeter of the rectangle is:

$$(80 + 95) \times 2 = 350 \text{ (cm)}$$

Answer: 350 cm.

Above are the most basic formulas for calculating the area and perimeter of a square. You can apply them to solve common geometry problems as well as create algorithms for your programming exercises .

It can be said that the square is one of the shapes with the easiest formulas for calculating its area and perimeter to remember. You can also easily apply the formula for calculating the area of a rectangle to a square. This is a fundamental concept that you need to master. You can apply this knowledge throughout your academic studies and even in algorithmic courses later on.

I hope this article is helpful to you!

You finished reading the article "**Area of a square, Perimeter of a square: Formulas and illustrative examples.**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.