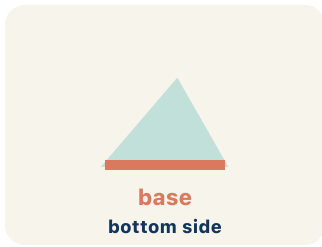




# Key Vocabulary Level 2 Standard

Picture first, then the word, then a plain-language meaning. Say each word out loud.



*If the bottom of a triangle is 10 cm, then  $b = 10$  cm in the formula  $A = \frac{1}{2} \times b \times h$*

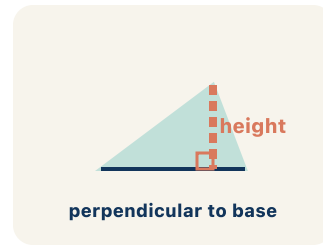
## Base

Write the definition:

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*A dashed vertical line from the top point straight down to the base at a  $90^\circ$  angle — like dropping a plumb line*

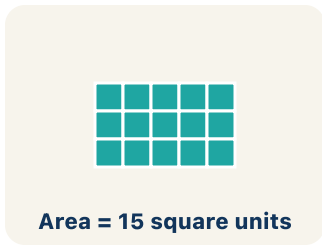
## Height

Write the definition:

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*A triangle with  $b = 8$  and  $h = 6$  has area =  $\frac{1}{2} \times 8 \times 6 = 24$  sq units — exactly half the rectangle around it*

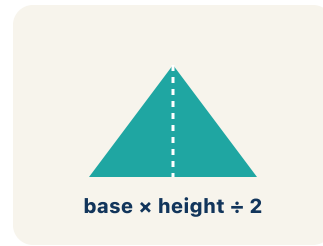
## Area

Write the definition:

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*The corner of a book or a door frame — the edges meet at exactly  $90^\circ$ , shown by a small square symbol*

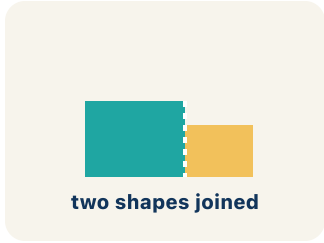
## Perpendicular

Write the definition:

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*A house shape = a rectangle (the walls) + a triangle (the roof); total area = rectangle area + triangle area*

### Composite figure

Write the definition:

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$$3x + 5$$

no equal sign

*A =  $\frac{1}{2} \times b \times h$  means Area equals one-half times base times height; for  $b = 12$  and  $h = 8$ ,  $A = 48$*

### Formula

Write the definition:

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## Guided Notes Level 2 Standard



### WHAT WE'RE LEARNING TODAY

I can find the area of a triangle using the formula  $A = \frac{1}{2} \times \text{base} \times \text{height}$ .



Fill in each blank as we go. Use the Word Bank to help you.



### WORD BANK – FILL EACH BLANK WITH THE BEST WORD

Base

Height

Area

Perpendicular

Composite figure

Formula



Tap any word to see what it means and a picture.

1 The side of a triangle used as the bottom for measuring area is the

2 The perpendicular distance from the base to the opposite vertex is the

3 The amount of flat space inside a triangle is its .

4 Two lines that meet at a  $90^\circ$  angle are .

5 A shape made of two or more basic shapes combined is a

6 A math rule written with symbols, like  $A = \frac{1}{2} \times b \times h$ , is a



### Watch & Try – Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

 **I do – watch**


Follow each step as your teacher solves it.

**Problem:** What is the area of a triangle with base 10 cm and height 6 cm?

- A. 30 sq cm
- B. 60 sq cm
- C. 16 sq cm
- D. 30 cm

**Step 1**  $A = \frac{1}{2} \times b \times h = \frac{1}{2} \times 10 \times 6 = 30$  square centimeters.

 **Answer:** A. 30 sq cm

 **We do – together**

Solve this one with your class using the same steps.


**Problem:** A triangle has an area of 24 sq ft and a base of 8 ft. What is the height?

- A. 6 ft
- B. 3 ft
- C. 16 ft
- D. 12 ft

**Step 1** \_\_\_\_\_

**Step 2** \_\_\_\_\_

**Answer:** \_\_\_\_\_

 **You do — your turn**

Now try one on your own. Show every step.

**Problem:** Why do we divide by 2 when finding the area of a triangle?

- A. A triangle is exactly half of a rectangle with the same base and height
- B. Triangles have 2 equal sides
- C. The base is always twice the height
- D. We always divide area formulas by 2

Show your work:

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## Try It

Solve on your own. Check the answer key when you are done.

**1. A triangular roof panel on the blueprint has a base of 7 ft and a height of 4 ft. What is its area?**

- A. 14 sq ft
- B. 28 sq ft
- C. 11 sq ft
- D. 22 sq ft

Show your work:

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**2. On the blueprint, a triangular garden bed has a base of 11 ft and a height of 6 ft. What is its area?**

- A. 33 sq ft
- B. 66 sq ft
- C. 17 sq ft
- D. 30 sq ft

Show your work:

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## Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

**A rectangle is 12 ft by 8 ft. A diagonal line cuts it into two triangles. What is the area of each triangle? Explain how the triangle area formula relates to the rectangle area formula.**

*Sentence starter: The rectangle's area is \_\_\_ because \_\_\_. Each triangle's area is \_\_\_ because a diagonal splits a rectangle into \_\_\_ equal triangles, so  $A = \frac{1}{2} \times \underline{\quad} \times \underline{\quad} = \underline{\quad}$ .*

Show your work:

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## Reflect — Exit Ticket

**A triangle has a base of 11 inches and a height of 8 inches. What is its area?**

- A. 44 sq in
- B. 88 sq in
- C. 19 sq in
- D. 44 in

Your answer:

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