

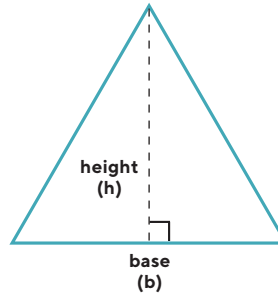


Geometry Detective #3

Area of a Triangle



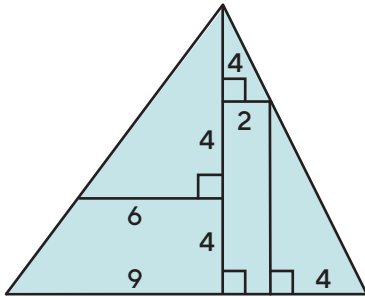
The **area of a triangle** is one-half the length of the base times the height. The **base** of a triangle can be any one of its sides. The **height** is the distance from a base to its opposite point, or vertex. A base must be perpendicular to the height.



Area of a triangle:
 $\frac{1}{2} \times \text{base} \times \text{height}$

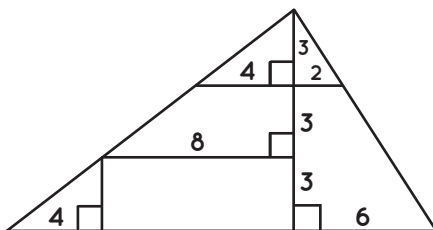
DIRECTIONS: Use the formula for the area of a triangle as shown above to calculate the area for the following triangles in square units. Show your work in the right column.

EXAMPLE:



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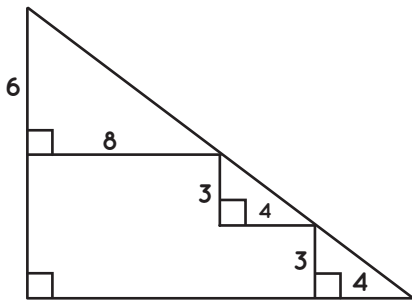
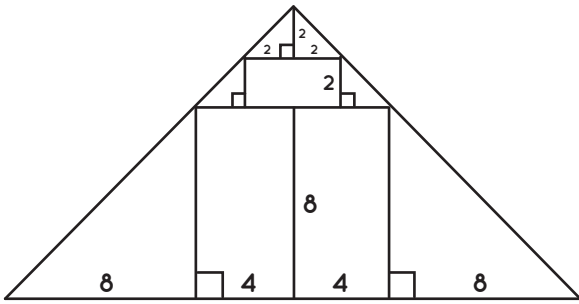
$$\begin{aligned} \text{base} &= 9 + 2 + 4 = 15 \\ \text{height} &= 4 + 4 + 4 = 12 \\ \text{area} &= \frac{1}{2} \times 15 \times 12 \\ &= 100 \text{ units}^2 \end{aligned}$$





Geometry Detective #3

Area of a Triangle



Challenge!

Look at the last triangle. Without doing the math, explain how you would find the area of that triangle a different way.