

Area of Right Triangles

This rectangle is divided into two right triangles that are *congruent*. This means that if you could flip one of them and move it on top of the other, they would match exactly.



The rectangle has an area of $2 \times 4 = 8$ square units.
Can you figure out what the area of just *one* of the triangles is?

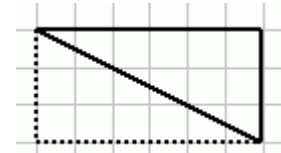
Here the area of the whole rectangle is $3 \times 5 = 15$ square units.
How could you figure out the area of just one of the triangles?



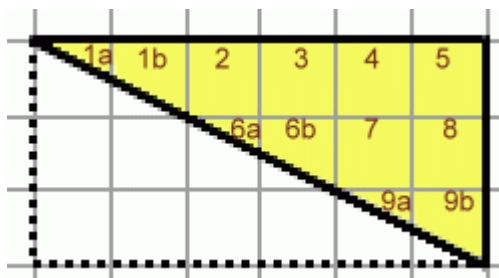
Here the sides of the triangle are 4 and 3 units. The other two sides of the rectangle are drawn with dotted lines.



Can you figure out the area of this triangle?



The area of the *rectangle* is 15 square units. The area of just the triangle is half of that, or $7 \frac{1}{2}$ square units.



Let's look closer at the last triangle above. Hopefully you figured out that its area is 9. To confirm that, we can actually count the little squares in the triangle.

Notice that some of the parts don't cover a complete square, but by combining those we can make whole squares and then count them.

1. Trace the "helping rectangle" for these right triangles. Then find the area of the triangles.

- a. _____ square units
- b. _____ square units
- c. _____ square units
- d. _____ square units
- e. _____ square units
- f. _____ square units
- g. _____ square units
- h. _____ square units

