

[Heron's formula in Scratch]

We're just going to implement Heron's formula to calculate areas. This is different to just calculating triangles using the half base times height formula. Our inputs are just the three sides, but then the formula also uses S , so we'll set this up and calculate it from A , B and C .

Now for the calculation, we have a square root, and then inside, we have all the terms multiplying each other. Remember that these blocks work as if they're within brackets, so we have s , multiplied by the other terms in brackets, each of which is a subtraction.

Now that we have it set up to calculate, we just want to check using a benchmark, or an example that we know. Remember that a 3,4, 5 triangle is a right angled triangle, because it's a Pythagorean triplet – and that means the height will be the same as one of the sides. So we can work out that the area should be 3×4 divided by 2, or $12/2$ which is 6. And so seeing this result, should give us a little bit of confidence that it seems to be working.