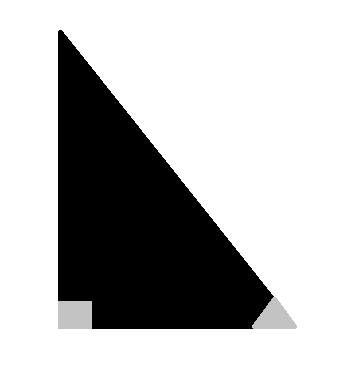
**Calculation of Area**



Height(h)

Hypotenuse(hyp)

Base(b)

1

2

Area of triangle = a = (b \* h)/2

We don’t have only the height of the triangle as the robot travels from foil 1 to foil 2. We get a sum of the height and the hypotenuse.

Let x = h + hyp (As the robot will travel from foil 1 to foil 2)

Therefore, hyp=x-h

hyp2=h2 + b2 (Pythagoras theorem)

(x-h) **2=**h**2**+b**2** (Substituting, hyp=x-h)

x**2**+h2 -2xh=h2 +b2 (Since (a-b) 2 = a2+b2 -2ab)

-2xh=b2 - x2

2xh=x2 -b2

**h=(x2 - b2)/2x.** So now, we have computed the height.

Then, Area =a = (b \* h)/2