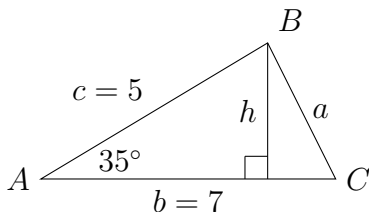


Worksheet - Area of a Triangle

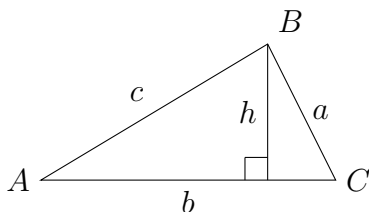
Assume we know the formula for the area of a triangle

$$\text{Area} = \frac{1}{2}(\text{base})(\text{height})$$

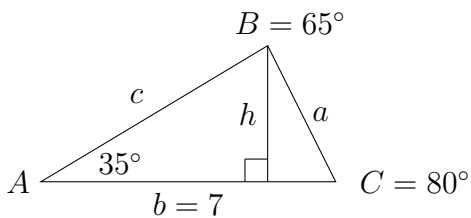
1. (SAS) Given $b = 7$, $c = 5$ and $A = 35^\circ$, find h and the area of the triangle.



2. Using c and A , write a formula for h . Then write a formula for the area of the triangle. Repeat using a and C .

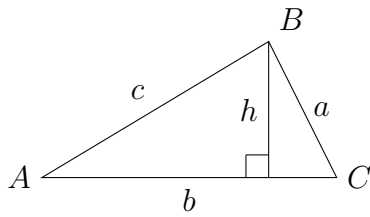


3. (AAS) Given $b = 7$, $A = 35^\circ$, $B = 65^\circ$ and $C = 80^\circ$



- Find a
 - Find h
 - Find the area of the triangle
4. Write a step-by-step procedure to find the area of the triangle given b , A , B and C . In other words, describe the steps you performed in part 3).

5. Derive a formula for the area of a triangle, given b , A , B and C , by doing the following



- Find a , as a function of b , A and B
- Find h , as a function of a and C
- Find h , as a function of b , A , B and C
- Find the area of the triangle, as a function of b , A , B and C