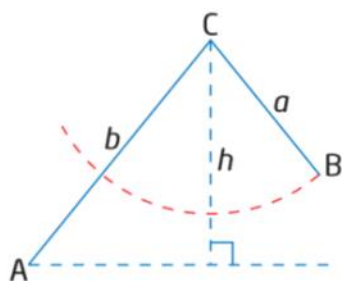


# The Ambiguous Case

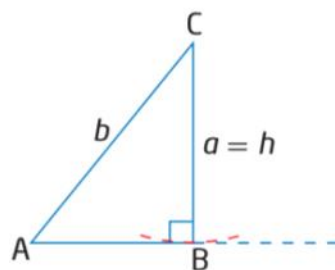
Given the measures of angle A, side length b and side length a, the following are possibilities:



$a < h$   
 $a < b \sin A$   
 no solution

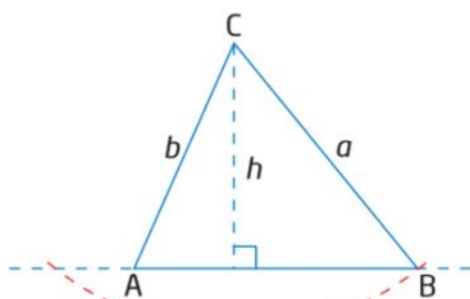
Why is there no solution in this case?

Recall that  
 $h = b \sin A$ .



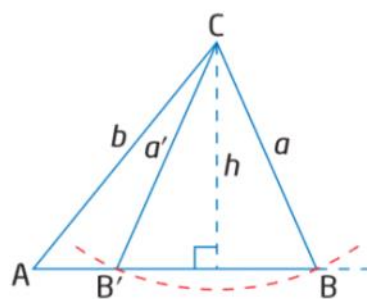
$a = h$   
 $a = b \sin A$   
 one solution

What type of triangle occurs in this case?



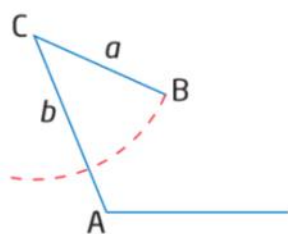
$a \geq b$   
 one solution

Why is there not another solution with B on the left side of A?

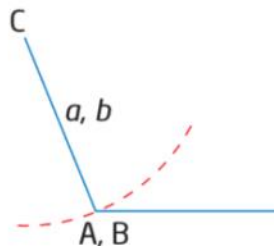


$h < a < b$   
 $b \sin A < a < b$   
 two solutions

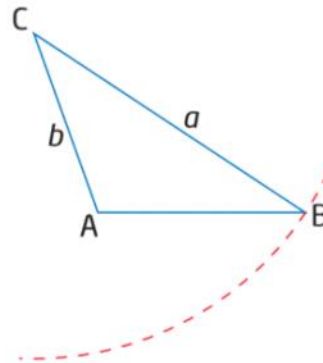
For an obtuse  $\angle A$ , three cases can occur.



$a < b$   
 no solution



$a = b$   
 no solution



$a > b$   
 one solution