

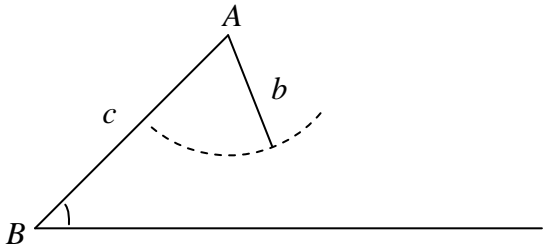
Math 173 – Section 8.1: SSA Triangles

Given sides b and c and angle B , can you draw the triangle?

Suppose angle B is acute:

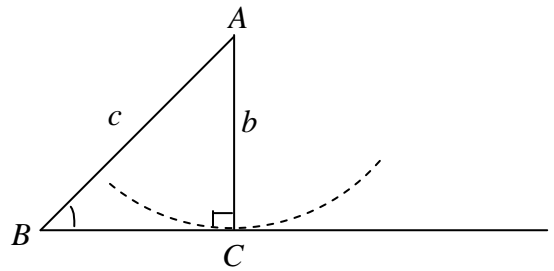
Case 1: $b < c \sin B$

→ No solution



Case 2: $b = c \sin B$

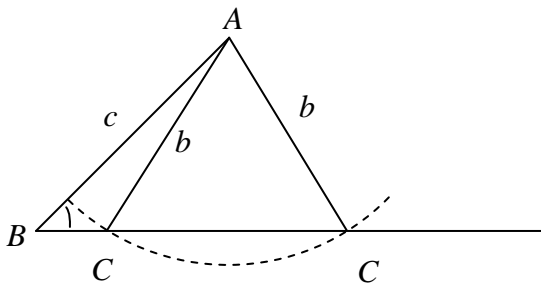
→ One solution



Case 3: $c \sin B < b < c$

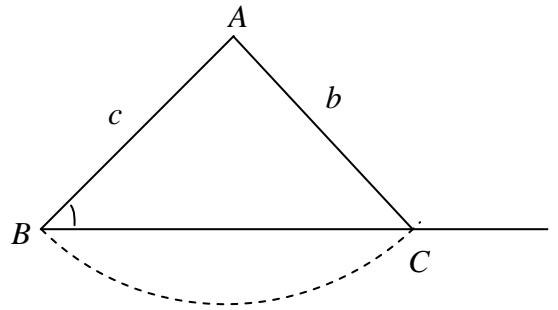
→ Two solutions

→ The ambiguous case



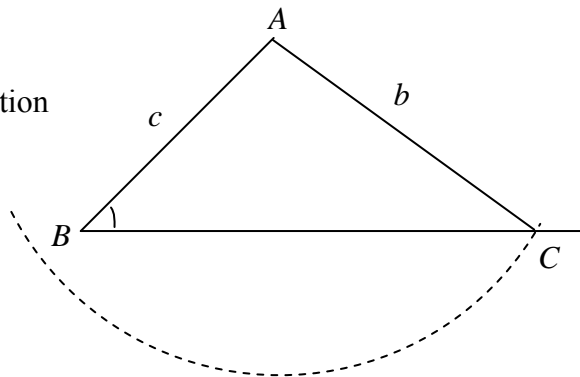
Case 4: $b = c$

→ One solution



Case 5: $b > c$

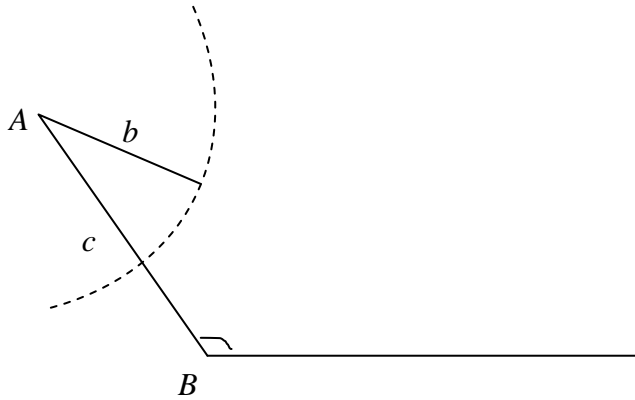
→ One solution



Suppose angle B is obtuse:

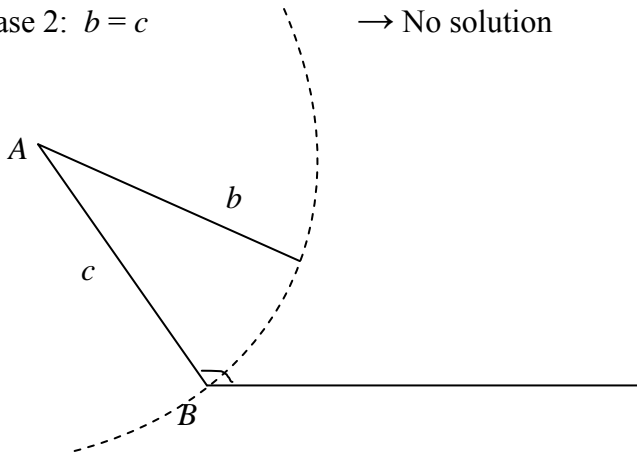
Case 1: $b < c$

→ No solution



Case 2: $b = c$

→ No solution



Case 3: $b > c$

→ One solution

