

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10

Please **print** your name

1. To solve the triangle in Figure 8, we begin by using the Law of Sines to determine  $\beta$ . Show the necessary work and reasons to find two values of  $\beta$ . You should conclude that  $\beta_1 = 68.79^\circ$  and  $\beta_2 = 111.21^\circ$ .

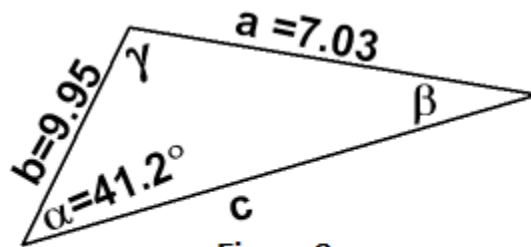


Figure 8  
SSA  
One Angle Given  
Two Solutions

**Triangle I**  $\beta = 68.79^\circ$

$$\gamma_1 = 180^\circ - 68.79^\circ - 41.2^\circ = 70.01^\circ$$

Use the Law of Cosines to calculate  $c$ . Show work that leads to  $c = 10.03$

**Triangle II  $\beta_2 = 111.21^\circ$**

$$\gamma_2 = 180^\circ - 111.21^\circ - 41.2^\circ = 27.59^\circ$$

Use the Law of Sines to calculate  $c$ . . Show work that leads to  $c = 4.94$