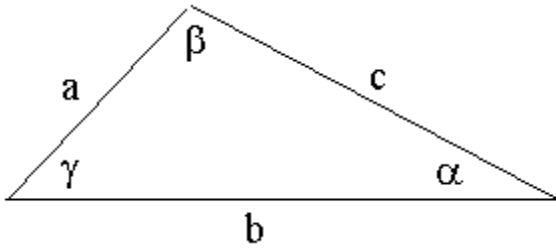


Triangle Trigonometry: The Law of Sines

Give sides lengths to the nearest tenth and angles to the nearest tenth of a degree.



Angle-Angle-Side Problems

[1] $\alpha = 40^\circ$, $\beta = 95^\circ$, $a=15$. Find b .

[2] $\beta = 105^\circ$, $\gamma = 60^\circ$, $b=42$. Find c .

[3] $\alpha = 26^\circ$, $\gamma = 55^\circ$, $c=10$. Find a .

[4] $\beta = 82^\circ$, $\gamma = 61^\circ$, $c=35$. Find b .

Angle-Side-Angle Problems

[5] $\alpha = 38^\circ$, $\beta = 99^\circ$, $c=24$. Find a .

[6] $\beta = 115^\circ$, $\gamma = 48^\circ$, $a=9$. Find b .

[7] $\alpha = 32^\circ$, $\gamma = 59^\circ$, $b=11$. Find c .

[8] $\beta = 91^\circ$, $\gamma = 55^\circ$, $a=35$. Find b .

Angle-Side-Side Problems

Remember: there may be no such triangle, exactly one triangle, or two possible triangles from the given information.

[9] $\alpha = 40^\circ$, $a=15$, $b=14$. Find β .

[10] $\alpha = 40^\circ$, $a=9$, $b=14$. Find β .

[11] $\alpha = 40^\circ$, $a=8$, $b=14$. Find β .

[12] $\beta = 80^\circ$, $b=10$, $c=11$. Find γ .

[13] $\beta = 80^\circ$, $b=10$, $c=9$. Find γ .

[14] $\beta = 25^\circ$, $b=5$, $c=10$. Find γ .

[15] $\gamma = 40^\circ$, $a=10$, $c=12$. Find α .

[16] $\gamma = 80^\circ$, $a=10$, $c=8$. Find α .

[17] $\gamma = 80^\circ$, $a=10$, $c=4$. Find α .