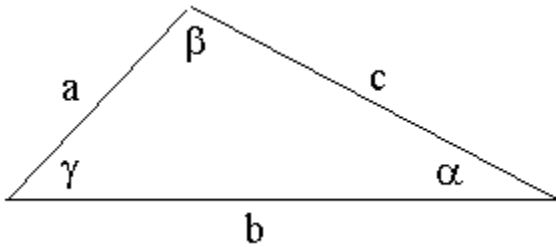


Triangle Trigonometry: The Law of Sines & The Law of Cosines

Give sides lengths and angles to three significant digits.

Find the area of each triangle.



[1]  $\alpha = 37^\circ$ ,  $\beta = 91^\circ$ ,  $a=15$ . Find  $b$ .

[2]  $a=9$ ,  $b=40$ ,  $c=39$ . Find  $\alpha$ .

[3]  $\alpha = 28^\circ$ ,  $\gamma = 63^\circ$ ,  $b=12$ . Find  $c$ .

[4]  $\gamma = 79^\circ$ ,  $a=11$ ,  $c=9$ . Find  $\alpha$ .

[5]  $\beta = 99^\circ$ ,  $\gamma = 58^\circ$ ,  $b=20$ . Find  $c$ .

[6]  $b=21$ ,  $\alpha = 25^\circ$ ,  $c=13$ . Find  $a$ .

[7]  $a=6$ ,  $b=15$ ,  $c=18$ . Find  $\beta$ .

[8]  $\beta = 89^\circ$ ,  $\gamma = 57^\circ$ ,  $a=3$ . Find  $b$ .

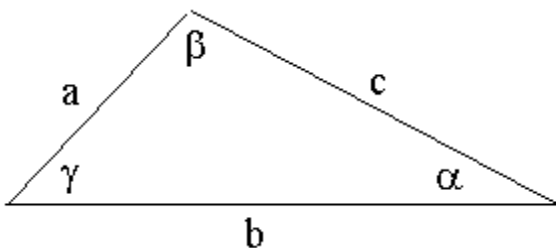
[9]  $\gamma = 39^\circ$ ,  $a=11$ ,  $c=13$ . Find  $\alpha$ .

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

[11]  $a=24$ ,  $\beta = 115^\circ$ ,  $c=44$ . Find  $b$ .

Triangle Trigonometry: The Law of Sines & The Law of Cosines

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



[1]  $\alpha = 37^\circ$ ,  $\beta = 91^\circ$ ,  $a=15$ . Find  $b$ .

[2]  $a=9$ ,  $b=40$ ,  $c=39$ . Find  $\alpha$ .

[3]  $\alpha = 28^\circ$ ,  $\gamma = 63^\circ$ ,  $b=12$ . Find  $c$ .

[4]  $\gamma = 79^\circ$ ,  $a=11$ ,  $c=9$ . Find  $\alpha$ .

[5]  $\beta = 99^\circ$ ,  $\gamma = 58^\circ$ ,  $b=20$ . Find  $c$ .

[6]  $b=21$ ,  $\alpha = 25^\circ$ ,  $c=13$ . Find  $a$ .

[7]  $a=6$ ,  $b=15$ ,  $c=18$ . Find  $\beta$ .

[8]  $\beta = 89^\circ$ ,  $\gamma = 57^\circ$ ,  $a=3$ . Find  $b$ .

[9]  $\gamma = 39^\circ$ ,  $a=11$ ,  $c=13$ . Find  $\alpha$ .

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

[11]  $a=24$ ,  $\beta = 115^\circ$ ,  $c=44$ . Find  $b$ .