

Answer on Question #60563 – Math – Trigonometry

Question

Solve triangle ABC which has angle $A=250.251$, angle $B=600.511$ and $a=3.82$. Find c .

3-6cm

7.0cm

7.4cm

8.8cm

Solution

Angles $A=250.251$ and $B=600.511$ are incorrect.

The sum of interior angles of triangle is equal to 180° :

$$A + B + C = 180^\circ,$$

hence

$$C = 180^\circ - A - B.$$

We can find c by means of the law of the sines:

$$\frac{\sin(A)}{a} = \frac{\sin(C)}{c},$$

hence

$$c = a \frac{\sin(C)}{\sin(A)} = 3.82 \frac{\sin(180^\circ - A - B)}{\sin(A)}.$$