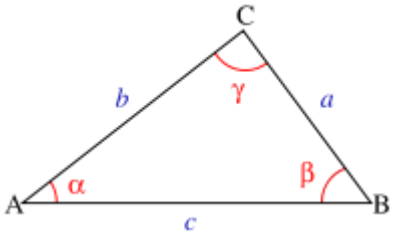
Answer on Question #51010 – Math – Trigonometry

Task: solve triangle ABC which have angle C=125^0; a=4cm and c=8cm. Find angle A

Solution



According to the Sine Rule,

$$\frac{a}{\sin A}=\frac{c}{\sin C}\Rightarrow \sin A=\frac{a}{c}\sin C\Rightarrow A=\arcsin\left(\frac{a\sin C}{c}\right)=\arcsin\left(\frac{4\sin 125^0}{8}\right)=\arcsin(0.4096)\approx 24.18^0$$

where arcsin(t) is the inverse of sine function sin(t).

Answer: A=24.18^0.