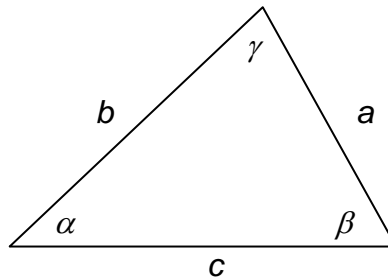


Provide both a clear and organized presentation. Show all of your work and completely simplify your answers.

Consider the following triangle:



1. Explain why $b\cos\gamma + c\cos\beta = a$
 $c\cos\alpha + a\cos\gamma = b$
 $a\cos\beta + b\cos\alpha = c$
2. Using Gauss-Jordan Elimination on an augmented matrix, solve the system of equations above for $\cos\alpha$, $\cos\beta$, and $\cos\gamma$
3. What have you just derived?