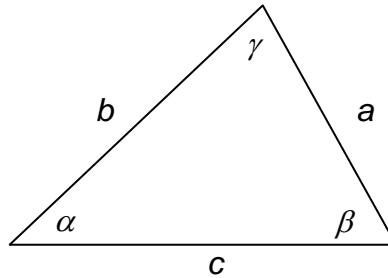


Consider the following triangle:



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. Solve the system of equations above for $\cos\alpha$, $\cos\beta$, and $\cos\gamma$ using two techniques:
 - a) Using an inverse matrix (let's use the adjoint method to generate the inverse matrix)
 - b) Cramer's rule.
3. What have you just derived?