

$$x := \sin\beta, y := \sin\gamma, A = \frac{c}{b}\sin\alpha, B := \frac{c}{b}\cos\alpha - \frac{a}{b}$$

$$-x + y = A, y = A + x$$

$$-\sqrt{1-x^2} - \sqrt{1-(A+x)^2} = B$$

$$1 - (A+x)^2 = (B + \sqrt{1-x^2})^2$$

$$-2Ax - A^2 - B^2 = 2B\sqrt{1-x^2}$$