

$$1 - \cos(\beta - \alpha) = 2 \sin^2 \frac{\beta - \alpha}{2},$$

$$\cos \alpha - \cos \beta = -2 \sin \frac{\alpha + \beta}{2} \sin \frac{\alpha - \beta}{2} = 2 \sin \frac{\alpha + \beta}{2} \sin \frac{\beta - \alpha}{2},$$

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$$1 - \cos(\beta - \alpha) + \cos \alpha - \cos \beta = 2 \sin \frac{\beta - \alpha}{2} \left[\sin \frac{\beta - \alpha}{2} + \sin \frac{\alpha + \beta}{2} \right] =$$

$$= 2 \sin \frac{\beta - \alpha}{2} \cdot 2 \sin \frac{\beta - \alpha + \beta + \alpha}{4} \cdot 2 \cos \frac{\beta - \alpha - \beta - \alpha}{4} =$$

$$= 4 \cos \frac{\alpha}{2} \sin \frac{\beta}{2} \sin \frac{\beta - \alpha}{2}.$$

(Schulhof Elza, Budapest.)