

2.45
7

$$1 + 2 \cos \alpha = \frac{\cos \alpha \cos \beta + \cos \alpha \cos \gamma}{\cos \alpha (\alpha + \beta)}$$

$$1 + 2 \cos \alpha = \frac{\cos \alpha \cos \beta + \cos \alpha (\alpha + \beta)}{\cos \alpha (\alpha + \beta)}$$

$$\cancel{1 + 2 \cos \alpha} = \frac{\cos \alpha \cos \beta}{\cos \alpha (\alpha + \beta)} + \cancel{1}$$

$$2 \cos \alpha \cos \alpha (\alpha + \beta) = \cos \alpha \cos \beta$$

$$\cos \alpha (\alpha + \beta) + \cos \alpha \cos \beta = \cos \alpha \cos \beta$$

$$\cos \alpha (\alpha + \beta) = 0$$

$$\alpha + \beta = \pi$$

$$\alpha + \beta + \gamma = \pi \quad ! \text{ e. lienda}$$

$$\Downarrow$$
$$\boxed{\alpha = \gamma}$$