

2.80  
k5

$$2 \ln 2 - \ln 2\beta - \ln 2\gamma + 2 \cos(\beta - \gamma) = 2$$

$$2 \ln(\beta + \gamma) - \ln 2\beta - \ln 2\gamma + 2 \cos(\beta - \gamma) = 2$$

$$2 \ln(\beta + \gamma) + 2 \ln\left(\frac{\pi}{2} - \beta + \gamma\right) - 2 \ln(\beta + \gamma) \cos(\beta - \gamma) = 2$$

$$2 \ln(\beta + \gamma) \left[ 1 - \overset{\cos}{\cos(\beta - \gamma)} \right] = 2 - 2 \cos(\beta - \gamma) = 2[1 - \cos(\beta - \gamma)]$$

$$1 - \cos(\beta - \gamma) = 0$$

$$\beta - \gamma = 0 \rightarrow \boxed{\beta = \gamma}$$

$$2 \ln(\beta + \gamma) = 2$$

$$\beta + \gamma = \frac{\pi}{2} \rightarrow \text{alles } \pi$$