

2.68  
75

$$\frac{\sin(\alpha - \frac{\pi}{2}) + \cos(\alpha + \pi) + \sin(\frac{\pi}{2} + \alpha)}{\sin(\frac{\pi}{4} + \alpha) - \cos(\frac{\pi}{4} + \alpha)} = \frac{\sqrt{2}}{2} \tan(\frac{\pi}{2} + \alpha)$$

$$\frac{-\cos \alpha - \cos \alpha + \cos \alpha}{\sin \frac{\pi}{4} \cos \alpha + \cos \frac{\pi}{4} \sin \alpha - \cos \frac{\pi}{4} \cos \alpha + \sin \frac{\pi}{4} \sin \alpha} = \frac{-\sqrt{2}}{2} \cot \alpha$$

$$\frac{-\cos \alpha}{2 \sin \frac{\pi}{4} \sin \alpha} = \frac{-\cos \alpha}{2 \cdot \frac{\sqrt{2}}{2} \sin \alpha} = \frac{-\cot \alpha}{\sqrt{2}} \cdot \frac{\sqrt{2}}{2} = \frac{-\sqrt{2} \cot \alpha}{2}$$