

$$\cos^6 \left(\frac{5\pi}{2} + \frac{1}{2} \arcsin\left(\frac{3}{5}\right) \right) + \cos^6 \left(\frac{7\pi}{2} - \frac{1}{2} \arcsin\left(\frac{4}{5}\right) \right)$$

$$\arcsin\left(\frac{3}{5}\right) = y \quad y \in [0; \pi/2]$$

$$\sin y = \frac{3}{5}$$

$$\cos y = \sqrt{1 - \sin^2 y} = \sqrt{1 - \frac{9}{25}} = \frac{4}{5}$$

$$\cos \frac{y}{2} = \sqrt{\frac{1}{2}(\cos y + 1)} = \sqrt{\frac{1}{2}\left(\frac{4}{5} + 1\right)} = \frac{3}{\sqrt{10}}$$

$$\sin \frac{y}{2} = a = \sin \frac{y}{2} \cos \frac{y}{2} = \frac{3}{5} * \frac{\sqrt{10}}{6} = \frac{\sqrt{10}}{10}$$

$$\arcsin\left(\frac{4}{5}\right) = x \quad x \in [0; \pi/2]$$

$$\sin x = \frac{4}{5}$$

$$\cos x = \sqrt{1 - \frac{16}{25}} = \frac{3}{5}$$

$$\cos \frac{x}{2} = \sqrt{\frac{1}{2}(\cos x + 1)} = \sqrt{\frac{1}{2}\left(\frac{3}{5} + 1\right)} = \frac{4}{2\sqrt{5}} = \frac{2}{\sqrt{5}}$$

$$\sin \frac{x}{2} = b = \frac{4}{5} * \frac{\sqrt{5}}{4} = \frac{\sqrt{5}}{5}$$

$$\cos^6 \left(\frac{5\pi}{2} + \frac{y}{2} \right) + \cos^6 \left(\frac{7\pi}{2} - \frac{x}{2} \right)$$

$$= \sin^6 \frac{y}{2} + \sin^6 \frac{x}{2} = \left(\frac{\sqrt{10}}{10}\right)^6 + \left(\frac{\sqrt{5}}{5}\right)^6 = \frac{1}{125} + \frac{1}{1000} = \frac{9}{1000}$$