

You may have miscalculated the effect of the $+\frac{\pi}{2}$ on the graph of cosine. It will shift the graph of $y = \cos \theta$ to the left by $\frac{\pi}{2}$ units. So the graph of $y = \cos\left(\theta + \frac{\pi}{2}\right)$ will have a hill just to the left of the y -axis, and a valley just to the right. This does not match the given graph.