

This graph has the general shape of a cosine function, so $y = a \cos bx$. The amplitude is 1. The graph of $y = \cos x$ has a hill centered around the y -axis, while this graph has a valley centered around the y -axis. So there has been a reflection over the x -axis and this means that $a = -1$.

Now there is a full cycle that runs from $-\frac{\pi}{4}$ to $\frac{3\pi}{4}$, so the period is π . Since $\pi = \frac{2\pi}{|b|}$, the value of b could be 2. So this could be the graph of $y = -\cos 2x$.