

Correct. The amplitude is 4 . This tells you that the y -coordinate of the low point is -4 . Because the coefficient 4 is positive, the graph has the same orientation as $y = \cos x$.

The period of this function is $\frac{2\pi}{\pi} = 2$. Therefore, each hill and each valley will extend over an interval of length 1 (half of a cycle). One hill will have the y -axis running through the middle and will lie on the interval $\left[-\frac{1}{2}, \frac{1}{2}\right]$. Next to it is a valley on $\left[\frac{1}{2}, \frac{3}{2}\right]$, and then a hill on $\left[\frac{3}{2}, \frac{5}{2}\right]$. The low point is in the middle of the valley, so the x -coordinate is 1.