

It looks like you confused the effect of a and b in $y = a \sin bx$. The amplitude of this graph is 3, while the amplitude of $y = 2 \sin 3x$ is 2. This graph has 2 cycles in the interval $[0, 2\pi]$, or a period of π . The period of $y = 2 \sin 3x$ is $\frac{2\pi}{3}$.