

You may have thought that the amplitude was the height of the whole curve, but it is just the height of one hill. Another way to say this is that the amplitude of $y = a\cos bx$ is given by $|a|$. You may have thought that $b = 4$, or you may have made a mistake dividing by a fraction. Note that $5\cos\left(\frac{x}{4}\right) = 5\cos\left(\frac{1}{4}x\right)$, so $b = \frac{1}{4}$. The period of

$y = a\cos bx$ equals $\frac{2\pi}{|b|}$.