You may have confused the effects of *a* and *b* in $y = a\sin bx$. The function $y = \frac{1}{4}\sin 5x$ has an amplitude of $\frac{1}{4}$ and a period of $\frac{2\pi}{5}$. The graphed function has an amplitude of 5 and a period of 8π. The correct answer is $y = 5\sin\left(\frac{1}{4}x\right)$.