

Because the high point is  $(2\pi, 5)$ , the height of the hill is 5. This is the amplitude of the function that was graphed.

The amplitude of  $y = 5\sin\left(\frac{1}{4}x\right)$  is also 5.

The length of one cycle is  $8\pi$ . This is equal to the period of the function that was graphed. On the other hand, the period of  $y = 5\sin\left(\frac{1}{4}x\right)$  is  $\frac{2\pi}{\frac{1}{4}} = 8\pi$ . So this could be the function that was graphed.