Outsmart the Bat

# The Problem

As a tiger moth, you can jam the sonar of your predator, the bat, to defend yourself. You have determined that a bat is hunting you using sound waves with a frequency of \_\_\_\_\_\_\_ Hz.

You know that sound travels at 340 m/s in your environment. If you make a sound with the same frequency, \_\_\_\_\_\_\_ Hz, what wavelength do you have to produce to throw off the bat and avoid being eaten?

# Determine the Wavelength

In the box below, show your work to figure out the wavelength needed to jam the bat’s sonar.

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## Necessary Wavelength for Survival: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_