

Superposition Principle

Be sure the simulation has finished loading before you begin.

Instructions

Click on the problem number to initialize the simulation. Answer the question after you have run the simulation. You may click and drag inside the animation to read the coordinates in order to obtain numerical values for use in your equations. Enter your function and click on the button to test your answers.

- [Problem 1](#)
Find the wavelength, frequency, and speed of the wave in the top panel, $f(x,t)$.
- [Problem 2](#)
Find a wave function, $g(x,t)$, that will produce a standing wave with a node at $x=0$, (i.e., at the center.)
- [Problem 3](#)
What wave function, $g(x,t)$, will produce a beat wave with a beat frequency of 0.2 Hz.
- [Problem 4](#)
Traveling waves need not be sinusoidal. Find a wave function, $g(x,t)$, that interferes destructively with the incoming wave, $f(x,t)$, at the point $x=0$.

Test your function here. $g(x,t)=$

