

Simulation Worksheet: Wave Representations

Feel free to press the “Get a new wave” button over and over until you get a wave you like.

The simulation shows two representations of a traveling wave on a string. At the top, you get a movie of the wave, which shows what the 2-meter length of string is doing at different instants in time. The second representation is the graph at the bottom. For two specific points on the string, the graph shows the displacement of these points as a function of time.

Your challenge is to find the values of six different parameters that help to describe the wave. In the table below, put a check mark under movie and/or graph if you use that representation to find the value of that parameter. Then, briefly describe how you find the value of the parameter. You don't need to enter your numerical answers here – enter those into the simulation, and get the simulation to check your numerical answers.

Parameter	Use movie to find?	Use graph to find?	Method
Amplitude (A)			
Wavelength (λ)			
Period (T)			
Angular frequency (ω)			
Wave speed (v)			
Maximum transverse speed of any point			