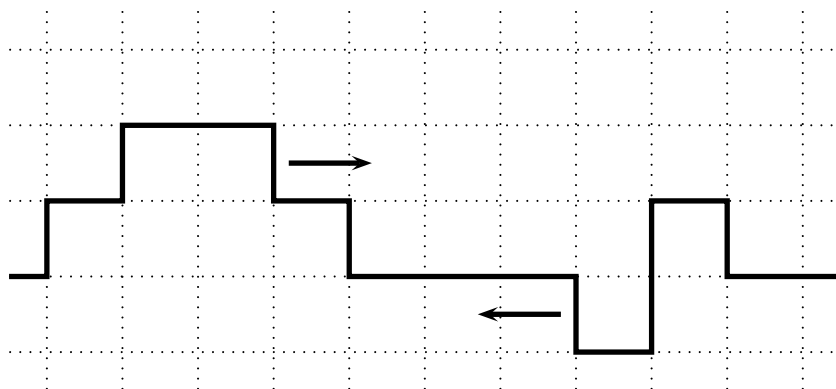
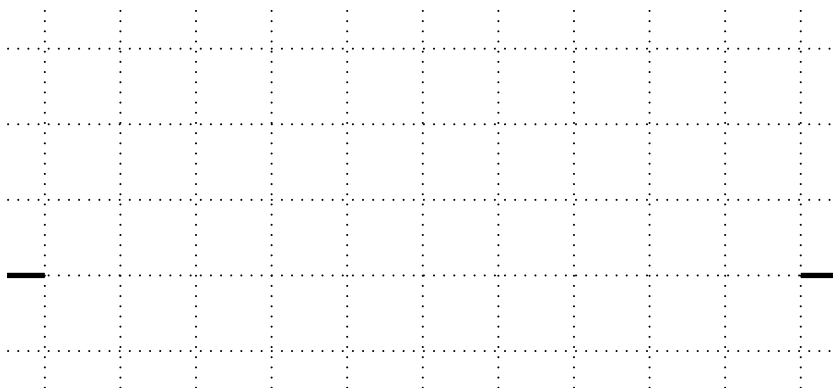


NAME:

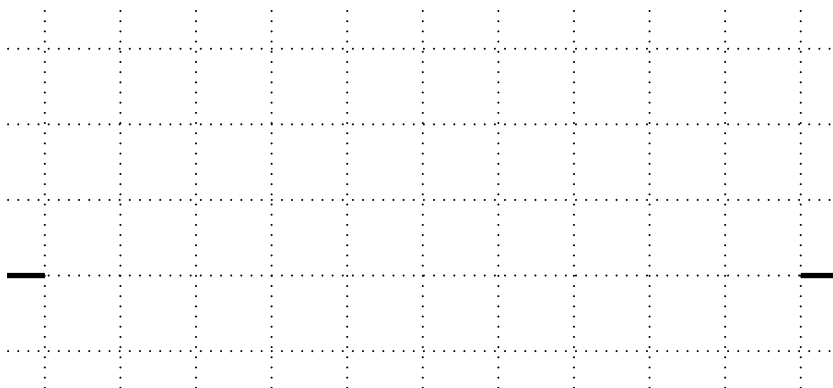
INTERFERENCE: This diagram shows two pulses headed toward each other. The pulses each travel one grid block in one time unit. Each successive diagram represents one unit later in time.



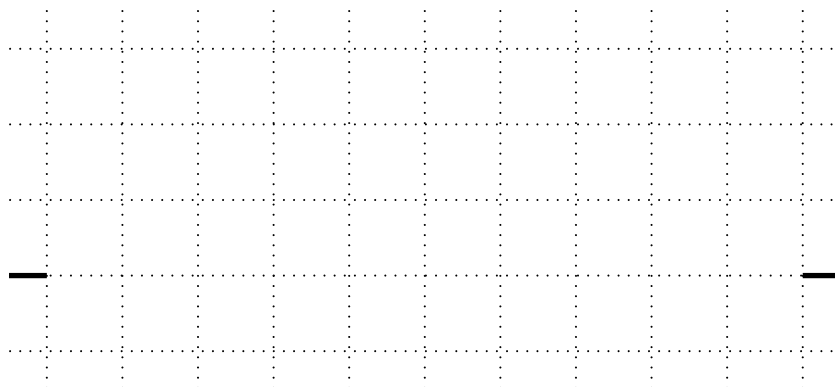
1. Draw the resulting pattern one time unit after the original diagram.



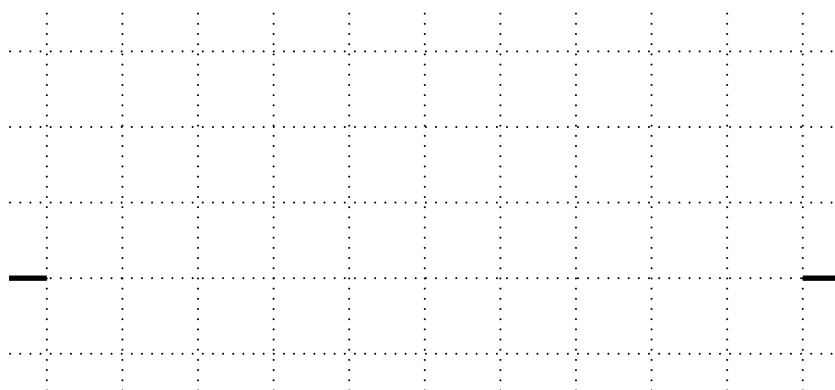
2. Draw the resulting pattern two time units after the original diagram.



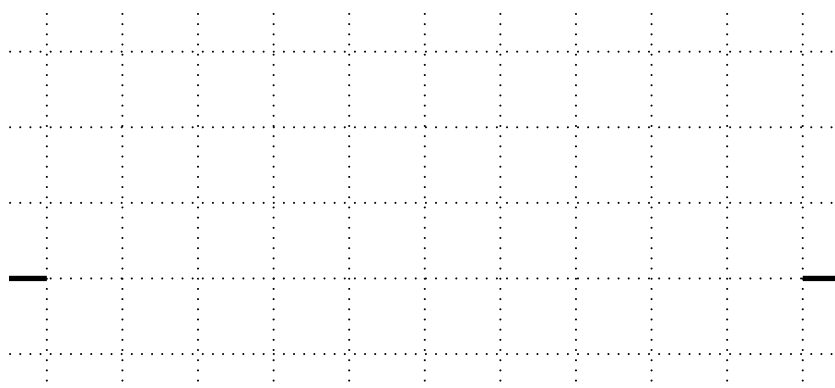
3. Draw the resulting pattern three time units after the original diagram.



4. Draw the resulting pattern four time units after the original diagram.



5. Draw the resulting pattern five time units after the original diagram.



STANDING WAVES: A string is stretched between the two points shown.

Waves travel along the string at a speed of 48 cm/s. Each grid block represents 1 cm. Draw the standing wave described, label the nodes and antinodes on it, and answer the questions pertaining to it.

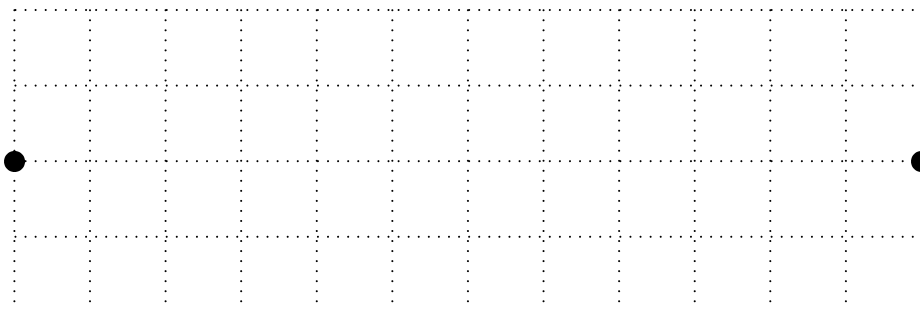
1. (a) Draw the longest possible standing wave on this string with an amplitude of 2 cm. Label its nodes and antinodes.



- (b) What is the wavelength of this wave?

- (c) What is the frequency of this wave?

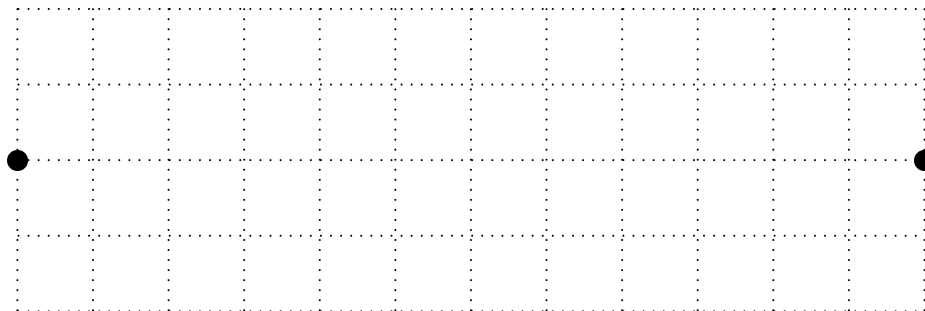
2. (a) Draw a standing wave for the third harmonic on this string with an amplitude of 1 cm. Label its nodes and antinodes.



- (b) What is the wavelength of this wave?

- (c) What is the frequency of this wave?

3. (a) Draw a standing wave for the sixth harmonic on this string with an amplitude of 1 cm. Label its nodes and antinodes.



- (b) What is the wavelength of this wave?
- (c) What is the frequency of this wave?