NAME _____ DATE _____

Ch 15: Wave Interference

1. On the diagram to the right:

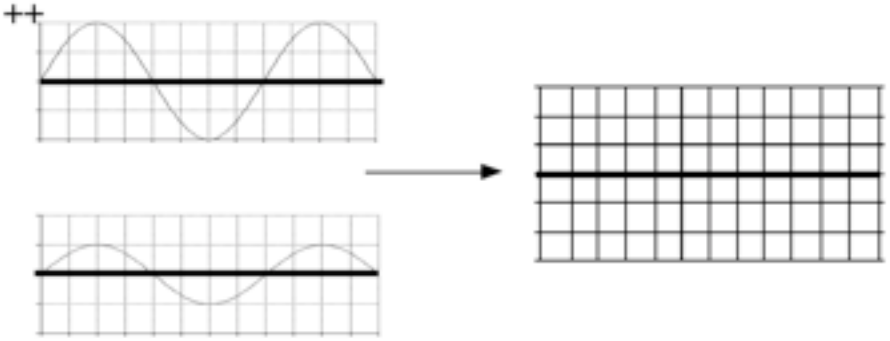
   a. Label the nodes and antinodes.

   b. What is its wavelength if the distance between nodes is 2 m? _____

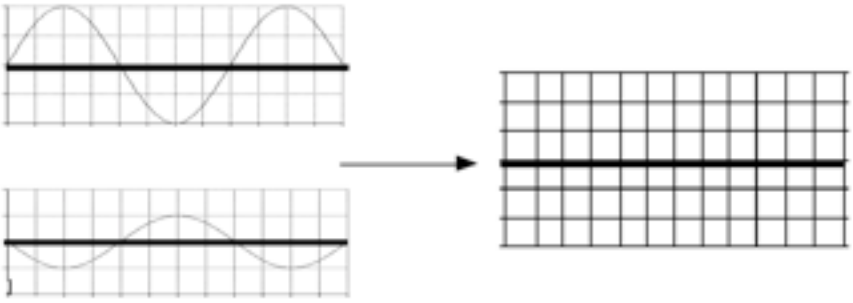
   c. If the person is shaking her hand up-and-down 12 times per second, what is the wave speed? (Show Work)

In each set of waves below, the two waves at the left represent two waves traveling at the same time.

2. In this example, combine the waves to show CONSTRUCTIVE INTERFERANCE.



3. In this example, combine the waves to show DESTRUCTIVE INTERFERANCE.



4. In the top example, would the interference produces a [louder / softer] sound.

5. In the bottom example, would the interference produces a [louder / softer] sound.

6. How is refraction different from diffraction?

Assessment

Quiz

Section: Wave Interactions

In the space provided, write the letter of the term or phrase that best matches each description.

_____ 1. the combination of two or more waves that results in a single wave

_____ 2. the change in direction of a wave when it encounters an obstacle or edge

_____ 3. interference that decreases amplitude

_____ 4. a pattern of vibration that resembles a stationary wave

_____ 5. points in a standing wave that have no vibration due to destructive interference

_____ 6. the bouncing back of a wave when it meets a surface or boundary

_____ 7. interference that increases amplitude

_____ 8. sounds produced by the interference of sound waves that are used to tune piano strings

_____ 9. the bending of waves as they pass from one medium to another at an angle

_____10. method of adding crests and troughs of interfering waves together to describe a new wave

a. diffraction

b. refraction

c. standing wave

d. reflection

e. constructive interference

f. destructive interference

g. principle of superposition

h. beats

i. interference

j. nodes