Unit 6D
Sound Diffraction and Interference
Practice Problems

Name:

Date:

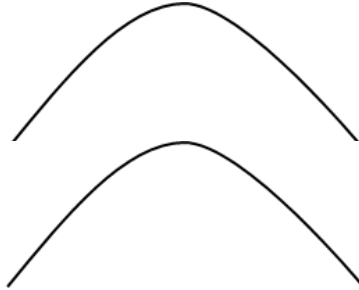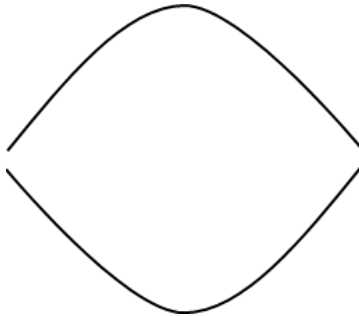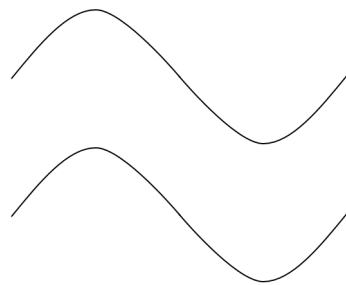## Work each of the following problems. SHOW ALL WORK.

1. Draw the resulting amplitude of the wave pulse that is created when the two pulses below overlap with one another:
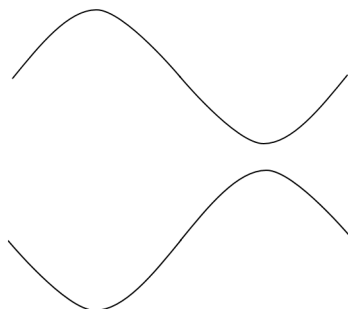

2. Draw the resulting amplitude of the wave pulse that is created when the two pulses below overlap with one another:

3. Draw the resulting amplitude of the wave that is created when the two waves below overlap with one another:
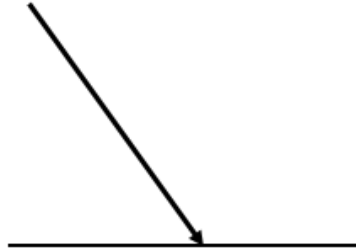

4. Draw the resulting amplitude of the wave that is created when the two waves below overlap with one another:

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Work each of the following problems. SHOW ALL WORK.

5. Draw the angle at which the sound wave will bounce off of the boundary below:

6. Draw the double slit diffraction pattern for the waves in the diagram below:

7. What is the frequency of the beats that will be formed when two waves, one with a frequency of 452 Hz and one with a frequency of 448 Hz, move in the same direction?

8. A student hears a beat frequency of 3 Hz when two tuning forks are struck. One of the tuning forks has a frequency of 512 Hz. What are the two possible frequencies of the other tuning fork?