PHYSICS *IN*MOTION
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Unit 6D
Sound Diffraction and Interference
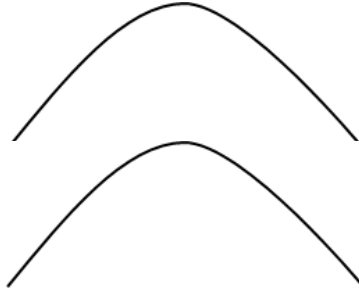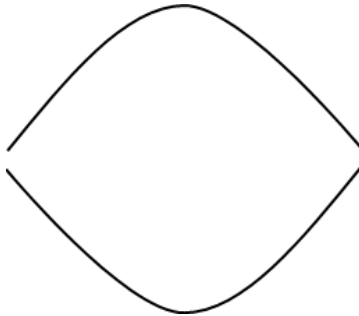*Practice Problems*
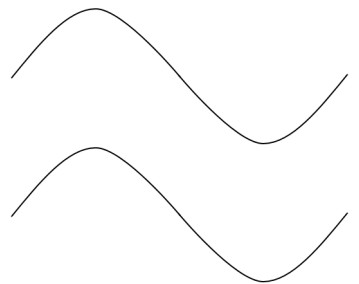
Name:

Date:

Work each of the following problems. SHOW ALL WORK.

1. Draw the amplitude of the resulting wave pulse that is created when the two pulses below overlap with each other:
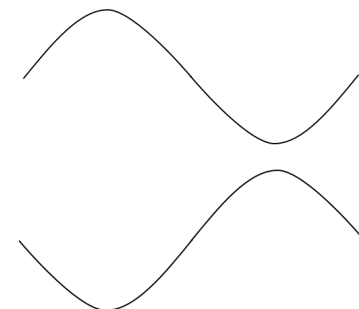
2. Draw the amplitude of the resulting wave pulse that is created when the two pulses below overlap with each other:

3. Draw the amplitude of the resulting wave pulse that is created when the two pulses below overlap with each other:

4. Draw the amplitude of the resulting wave pulse that is created when the two pulses below overlap with each other:

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Practice Problems

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Work each of the following problems. SHOW ALL WORK.

5. Complete the diagram below by drawing the angle at which the sound wave will bounce off the boundary.
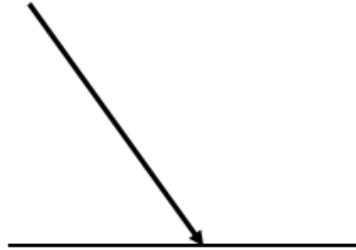
6. Draw the double-slit diffraction pattern for the waves illustrated in the diagram below:

7. What is the frequency of the beats that form 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?