Name: Period:

Properties of Waves Worksheet

1. Define the *period* of a pendulum?

2. What is the period of a pendulum that takes one second to make a complete back-and-forth vibration?

3. Which of these pendulums would have the greatest *length* measured in meters: a pendulum with a period of 2 seconds or a pendulum with a period of 1.5 seconds?

4. Describe how a *sine curve* is related to a wave.

5. Draw a picture of a wave and label these parts of the wave: *amplitude*, *crest*, *trough*, and *wavelength*.

6. Distinguish between the *period* and *frequency* of a wave. How do these two quantities relate to each other?

7. Does the *medium* in which a wave travels move along with the wave itself? Defend your answer.

8. How does the *speed* of a wave relate to its *frequency* and *wavelength*?

9. As the frequency of sound of sound is increased, does the wavelength increase or decrease? Give an example.

10. Distinguish between a *transverse* wave and a *longitudinal* wave.

11. Distinguish between *constructive interference* and *destructive interference*.

12. Is *interference* a property of only some types of waves or is it a property of all types of waves?

13. What causes a standing wave?

14. When a wave source moves toward a receiver, does the receiver encounter an increase in wave *frequency*, wave *speed*, or both?