

Name: _____

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Chapter 20.3 Homework

Conceptual Physics

Parent Signature: _____

Each numbered question is worth one point unless otherwise noted.

Reviewing Concepts

14. Some musicians wear earplugs when playing in concerts. What happens when the inner ear is exposed to very loud noises? (1.5)

15. Which part of the ear vibrates in response to sound in the ear canal? (0.5)

16. How are the pitch and frequency of a sound related?

17. What gives different instruments their characteristic sound? For example, why does a note played on a piano sound different from the same note played on a guitar?

18. How are beats created?

19. Why can't you hear a dog whistle at 25,000 Hz, but your dog can?

Solving Problems

6. If "middle" C on a piano has a frequency of 264 Hz, what is the frequency of the C one octave higher? One octave lower?

7. Describe what you hear when a musical note at 440 Hz is played at the same time as another note played at 443 Hz.