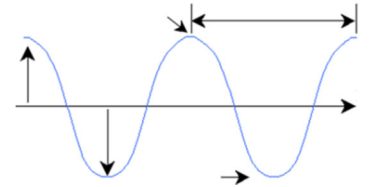


Test Review: Ch. 25 Waves

Formulas provided: $v = f \cdot \lambda$ $T = \frac{1}{f}$ $f = \frac{1}{T}$

To fully prepare for the tests make sure you have: 1) Watched the “flip” lecture videos over waves, 2) Reviewed the vocabulary flashcards on your iPad app, 3) Reviewed the daily assignments we completed (Waves guided reading, Wave velocity calculations) 4) Review that labs we completed for understanding of the concepts and relationships (Waves on a pendulum, drawing waves, slinky lab). 5) Complete this test review—Don’t just look up answers but be able to explain the answers to these questions.

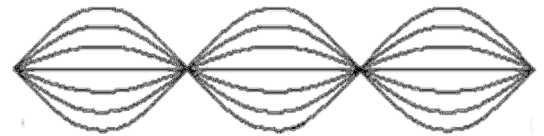
1. Define period and frequency and describe how they are related.
2. Describe the wavelike motion of a pendulum including how the motion of the pendulum demonstrates the frequency (f), period (T) and wavelength (λ) of oscillatory motion.
3. Identify longitudinal (AKA compressional) and transverse waves.
4. Draw and label the parts of a wave. (Both longitudinal and transverse).



5. Be able to define wavelength, amplitude, crest, trough, rest, compression & rarefaction.
6. What is the source of all waves? _____. What happens to the frequency of a wave then this is doubled?
7. What is the unit for frequency? _____
8. Compare and contrast mechanical and electromagnetic waves.
9. What is a transverse waves and list some examples?
10. A longitudinal wave is also known as a _____ wave.



11. Sound is what type of wave? _____
12. When does interference occur?
13. What part of a standing wave does NOT move?
14. Label the nodes and antinodes in a standing wave.
15. What are some ways to create a standing wave?
16. What feature of a wave relates to the amount of energy it carries?
17. What happens to the amplitude over time as a wave travels through a medium?
18. What happens to the period of a wave if you double the frequency (remember they are inverses!)?
19. What does the amplitude represent?
20. What does the wavelength represent?
21. Two waves are constructively (they are in sync-in phase) interfering...what should you do with the amplitudes?



Problems

- a. The period of a wave is 20 seconds, what is its frequency?
- b. A wave has a frequency of 0.10 Hz, what is the period?
- c. What is the velocity of a wave that moves up and down 4 complete cycles in one second and has a wavelength of 6.0 m?
- d. A wave has a frequency of 3.0 Hz, and travels a distance of 5.0 m in one second – what is its velocity? (Tricky-think through this one!)
- e. All electromagnetic waves move at a speed of 3.0×10^8 m/s, if the frequency a radio receives is 50 megahertz, what is the wavelength in m?... (hint a megahertz = 1×10^6 Hz).
- f. A captain notices wave crests passing the anchor line on his boat every 4 seconds and estimates the distance between crests at 12m. What is the speed of the water waves?

3 m/s	24m/s	0.05 Hz	6m	5m/s	10 sec
-------	-------	---------	----	------	--------