

Chapter 19: Vibrations and Waves Hewitt 10th Edition

2. A vibration

4. Long

6. Period (T) is the time between successive crests. Amplitude is the maximum displacement of the wave. Wavelength is the distance between successive crests. Frequency (f) is the number of cycles of the wave per unit time.

8. $f=1/T$

10. No. Water shakes up and down due to the wake of a boat, but doesn't necessarily move toward the shore. Light requires no medium at all.

12. Right angles.

14. Distance between points of maximum compression (density).

16. Constructive interference = two waves add together. Destructive interference = two waves cancel.

18. Node = amplitude is zero. Anti-node = amplitude is a maximum.

20. Yes, Yes, No.

22. Blue shift = increased frequency of light. Red shift = decreased frequency of light.

24. Greater.

26. 3-dimensional.

28. False. Bullet and lion whip.