

DO NOT TURN IN – Keep for homework.

1. What kind of motion is a swing? _____
2. The part of harmonic motion that repeats over and over is called its c_____.
3. If we start the cycle of a pendulum at the right hand side, the cycle must end where?
4. A system that shows harmonic motion we call an _____.
5. Give an example:
6. The time for one cycle is called the:
7. The number of cycles per second is called:
8. Where do you hear this word every day?
9. 440 cycles per second can be said to be 440 _____.
10. Write the equations (with units) for period and frequency below (you will need for homework):

Period equation:

Frequency equation:

11. (p 175) The size of a cycle we call its:
12. When a pendulum swings far from the center does it have a lot of amplitude or a little?
13. When friction slows down harmonic motion we say it is d_____ it.
14. What is the amplitude of the graph on page 176?
15. What is the period of the graph?
16. How many complete cycles are shown in the graph?
(Being able to find one cycle on a graph will be important....hint...hint...hint)
17. Write the equation for amplitude here:

18. On page 179, do the graphs show harmonic motion in phase or out-of-phase?
19. Give two examples of oscillators:

To chapter 12:

20. (p.188) Consider a pendulum and a wave, what is one big difference between the two? (Hint: read “Evidence for suspecting there are waves.”)

21. Which of these is not a wave: X-rays; sound; wheel spinning; light

22. What is the difference between a longitudinal wave and a transverse wave?

23. What 3 basic properties do waves have in common with oscillators?

24. Find the symbol (the Greek letter) we use for wavelength:
25. Write the equation for the speed of a wave:

26. If a wave with a 3 m wavelength had a frequency of 4 Hz, find the speed of the wave:

27. The high point of a wave we call the c_____.
28. The low point of a wave we call the t_____.
29. This kind of wave goes in straight lines:
30. When a wave bounces off of something we call it:
31. When a wave bends while going through something we call it:
32. When a wave bends while going around something we call it:
33. When a wave disappears inside something we call it:
34. (p 197) What is the difference between a node and an antinode?

35. Which harmonic of a vibrating string has 2 antinodes?
36. (p 198) When two waves collide and make a bigger wave we call this:
37. When two waves collide and cancel each other out or make a smaller wave we call this: