

# Physics 20

## Period and Frequency Worksheet

*REMEMBER TO USE PROPER SIG FIGS!!*

**Part A.** Find frequency and period of the following:

1. A wave completes 30 cycles in 15 seconds.
2. A slinky goes through 20.0 cycles in 5.0 seconds.
3. A water wave is seen to have 80 crests in 20 seconds.
4. A fly flaps its wings back and forth 121 times in one second.
5. A wave completes 10 cycles in 2 minutes.
6. The second hand of a clock completes one cycle in one minute.
7. A wave completes one cycle every 2 seconds.
8. A wave completes 33 cycles in 11 seconds.
9. A wave completes 40. cycles in 628 seconds.
10. A wave completes  $\overline{200}$  cycles in 4.00 seconds.

**Part B.** Find the period of the following:

11. A wave has a frequency of 10 Hz.

12. A wave has a frequency of 2 000 Hz.

13. A wave has a frequency of 0.89 Hz.

14. A wave has a frequency of 51.2 Hz.

15. A wave has a frequency of 400 Hz.

16. A wave has a frequency of 262 Hz.

17. A wave has a frequency of  $9.95 \times 10^7$  Hz.

18. A wave has a frequency of 0.10 Hz.

19. A wave has a frequency of 1600 Hz.

20. A wave has a frequency of 108 Hz.

**Part C.** Find the frequency of the following:

21. A wave with a period of 120 s.

22. A wave with a period of 0.04 s.

23. A wave with a period of 52 s.

24. A wave with a period of 2.00 s.

25. A wave with a period of 21 s.

26. A wave with a period of 4.8 s.

27. A wave with a period of 0.7 s.

28. A wave with a period of 73 s.

29. A wave with a period of 500 s.

30. A wave with a period of 18 s.

**Part D.** Thinking Critically

As frequency increases will the period of a wave increase or decrease? Explain.