7.1 Wave Properties
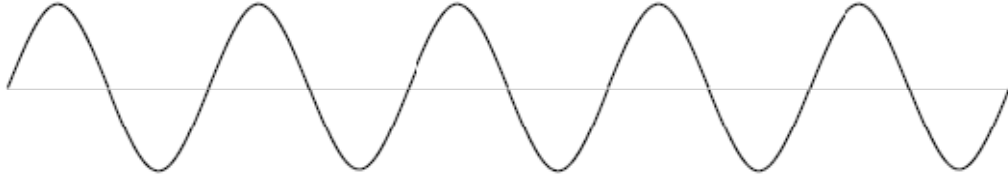
The time from the beginning to the end of the wave in each situation is 1 second.

1. Wave 1

a) How many wave cycles are completed in this diagram? _____

b) Wavelength _____ cm c) Amplitude _____ cm d) frequency _____ Hz

e) speed _____ cm/s f) period _____ s

2. Wave 2
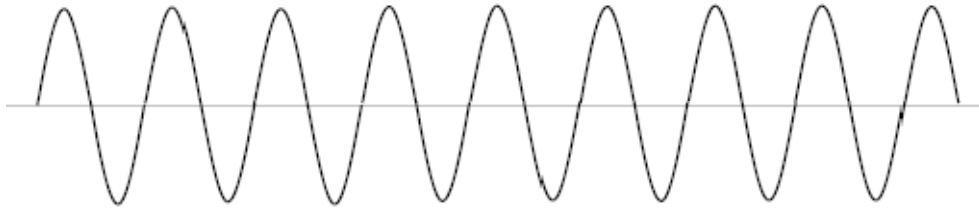

a) How many wave cycles are completed in this diagram? _____

b) Wavelength _____ cm c) Amplitude _____ cm d) frequency _____ Hz

e) speed _____ cm/s f) period _____ s

3. Wave 3

a) How many wave cycles are completed in this diagram? _____

b) Wavelength _____ cm c) Amplitude _____ cm d) frequency _____ Hz
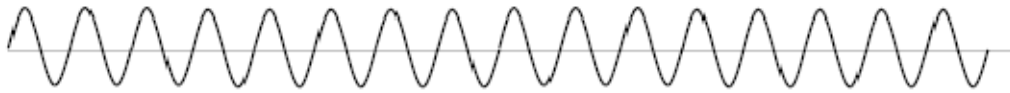
e) speed _____ cm/s f) period _____ s

4. Wave 4

a) How many wave cycles are completed in this diagram? _____

b) Wavelength _____ cm c) Amplitude _____ cm d) frequency _____ Hz

e) speed _____ cm/s f) period _____ s

5. Wave 5

a) How many wave cycles are completed in this diagram? _____

b) Wavelength _____ cm c) Amplitude _____ cm d) frequency _____ Hz

e) speed _____ cm/s f) period _____ s

6. What is the wavelength of a sound wave with a frequency of 50 Hz? (Speed of sound is 342 m/s)

7. A sound wave in a steel rail has a frequency of 620 Hz and a wavelength of 10.5 m. What is the speed of sound in steel?

8. Determine the frequency of a microwave 6.0 cm in length. (A microwave is an electromagnetic wave. It travels through space at a speed of 3.0×10^8 m/s)

9. What is the period of the microwave in problem 8?