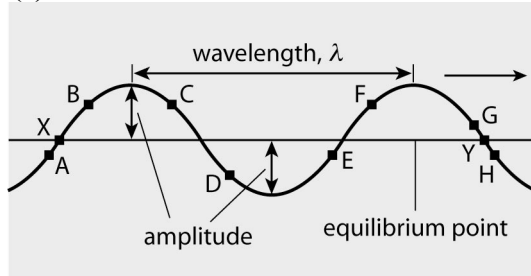


## Section 8.3: Wave Characteristics

### Section 8.3 Questions, page 387

1. (a)

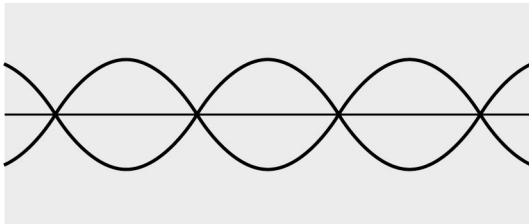


(b) The pairs of points that are in phase are A and E (one wavelength apart), and B and F (one wavelength apart).

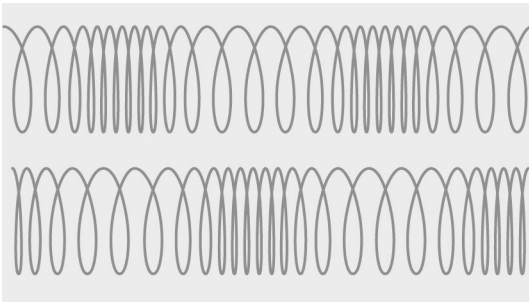
2. In transverse waves, wavelength is the distance between two similar points in successive identical cycles in a wave. In transverse waves, amplitude is the maximum displacement of a vibrating particle in a wave. In longitudinal waves, amplitude is the maximum pressure created and the same definition of wavelength applies.

3. Frequency is the number of times the wave repeats itself in a given time frame, whereas the wave speed is the measure of how far the wave travels per second.

4.



5.



6. Yes, those motions were examples of simple harmonic motion because they were continuous motions with constant amplitude, period, and frequency.