16 vibration/sec find maximum velocity and energy at mean position.
802.8 cm/sec; 1.6 Ãƒâ€” 106 erg.

[PHY203] The amplitude of a wave is doubled, with no other changes made to the wave. As a result of this doubling, which of the following statements is correct?
The maximum transverse speed of an element of the medium changes.

[PHY203] Find the angular frequency Ã□â€° and speed v of a sinusoidal wave traveling in the positive x direction with an amplitude of 15.0 cm, a wavelength of 40.0 cm, and a frequency of 8.00 Hz, if the vertical displacement of the medium at t = 0 and x = 0 is 15.0 cm.
50.3 rad/s; 320 cm/s

[PHY203] If the wavelength of a wave on a particular string is doubled, what happens to the wave speed v and the frequency f?
v is unchanged and f becomes one-half as great

[PHY203] Suppose you create a pulse by moving the free end of a taut string up and down once with your hand beginning at t = 0. The string is attached at its other end to a distant wall. The pulse reaches the wall at time t. Which of the following actions, taken by itself, decreases the time interval required for the pulse to reach the wall?
Using a string of the same linear mass density but under increased tension

[PHY203] A sinusoidal wave traveling in the positive x direction has an amplitude of 15. 0 cm, a wavelength of 40.0 cm, and a frequency of 8.00 Hz. The vertical displacement of the medium at t = 0 and x = 0 is also 15.0 cm. Find the angular wave number k and period T of the wave.
0.157 rad/cm; 0.125 s

[PHY203] A taut string for which Ã‚Âµ = 5.00 Ãƒâ€” 10-2 kg/m is under a tension of 80. 0 N. How much power must be supplied to the string to generate sinusoidal waves at a frequency of 60.0 Hz and an amplitude of 6.00 cm?
512 W

[PHY203] A block of mass m is first allowed to hang from a spring in static equilibrium. It stretches the spring a distance L beyond the springÃ¢â‚¬â„¢s unstressed length. The block and spring are then set into oscillation. How will the period of this system compare with the period of a simple pendulum having a length L and a bob mass m?
Equal

[PHY203] A string is driven at a frequency of 5.00 Hz. The amplitude of the motion is 12.0 cm, and the wave speed is 20.0 m/s. Determine the angular frequency Ã□â€°, angular wave number k for this wave, and write an expression for the wave function.
y = (0.120m) sin (1.57x Ã¢â‚¬â€œ 31.4t)

[PHY203] A sinusoidal wave of frequency f is traveling along a stretched string. The string is brought to rest, and a second traveling wave of frequency 2f is established on