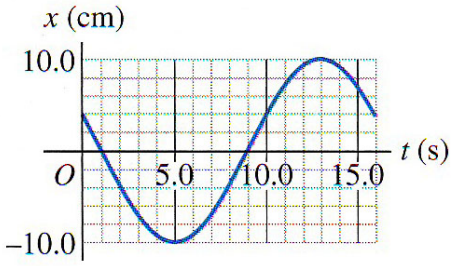
1. A produce scale at the market bounces up and down twice a second when 2.00kg of bananas are dropped on it. Find the spring constant of the internal spring.

2. A 750kg car drops 5.00cm toward the ground when four 75.0kg passengers get it to go for a ride. Find the vibration frequency of the car when it hits a bump in the road.

3. The graph at the right shows the position versus time for an oscillating object. Find (a)the amplitude, (b)the period, (c)the frequency, (d)the angular frequency. (e)This curve is not exactly a cosine. Explain what this tells you about the equation for position as a function of time.



4. From the graph of position versus time at the right, find (a)the time when the speed is maximum, (b)the position when the speed is a maximum, and (c)the maximum speed. (d)Use the results from problem 3 to calculate the maximum speed and compare your answer to your answer from part c.