

# AP Physics 1 Review Questions

## Integrating Content, Inquiry, and Reasoning

1. How might you determine the mass of a common object such as a set of car keys or a wool cap using the ideas presented herein?
2. 50-g and 300-g masses were used to induce simple harmonic motion in the spring and rubber band, respectively. How would increasing these masses impact the oscillating frequencies of the rubber band and spring?
3. Identify two sources of error that may arise in the experimental determination of spring constants and explain how the sources of error may affect results.
4. Given your answers to Questions 2 and 3, how might you mitigate the error associated with counting the number of oscillations exhibited by the spring or rubber band.
5. Why is there a discrepancy between the rubber band spring constants derived via the simple harmonic motion and the hanging-mass methods?
6. Estimate, in a very general sense, the spring constant for the spring in a car's shock absorber.