1. (HRK Chapter 1) The period of oscillation of a nonlinear oscillator depends on the mass m, with dimensions of M; a restoring force constant k with dimensions of $\mathrm{ML}^{-2}\mathrm{T}^{-2}$, and the amplitude A, with dimensions of L. What should the period of the oscillation be proportional to?
   Answer: $A^{-1}\sqrt{m/k}$

2. (Openstax Chapter 1) The speed of sound is measured to be 342 m/s on a certain day. What is this in km/h?
   Answer: 1230 km/h

3. (Openstax Chapter 1) (a) A car speedometer has a 5.0% uncertainty. What is the range of possible speeds when it reads 90km/h? (b) Convert this range to miles per hour. (1 km=0.6214 mi)
   Answer: (a) 90 ± 5 km/h (b) 56 ± 3 mph (only 1 sig fig is prompted by the question)