1. A 1-kg mass attached to a spring oscillates with a period of 1.0 s. What is the spring constant?

   A) 6.3 N/m
   B) 20 N/m
   C) 40 N/m
   D) You must know the amplitude.

2. A joule is a unit of energy with units of:

   A) kg m / s^2
   B) kg / (m^2 s^2)
   C) kg / (m s^2)
   D) kg m^2 / s^2

Some useful equations:

\[ P = \frac{F}{A} \]
\[ T = 2\pi \left( \frac{l}{g} \right)^{1/2} \]
\[ E = \frac{1}{2} k A^2 = \frac{1}{2} m v_0^2 \]
\[ T = 2\pi \left( \frac{m}{k} \right)^{1/2} \]
1. A simple pendulum of length 1 m swings with a period of 3.2 s. Where is this pendulum most likely located?

   A) The Earth \((g=9.80 \text{ m/s}^2)\)
   B) The Moon \((g=1.62 \text{ m/s}^2)\)
   C) Mars \((g=3.75 \text{ m/s}^2)\)
   D) Venus \((g=8.88 \text{ m/s}^2)\)

2. A pascal is a unit of pressure with units of:

   A) \(\text{kg m} / \text{s}^2\)
   B) \(\text{kg} / (\text{m}^2 \text{ s}^2)\)
   C) \(\text{kg} / (\text{m} \text{ s}^2)\)
   D) \(\text{kg m}^2 / \text{s}^2\)

Some useful equations:

   \(P = \frac{F}{A}\)  \(T = 2\pi \sqrt{\frac{l}{g}}\)
   \(E = \frac{1}{2} k A^2 = \frac{1}{2} m v_o^2\)  \(T = 2\pi \sqrt{\frac{m}{k}}\)