hhh.schaums.11.31_11.35

11.31 The smaller block will start to slide when the lower block is at its greatest acceleration which occurs at x = 8.0cm
This acceleration can be found from F = kx = ma
For the smaller block to not slide the frictional for ce must be equal to m_{small}•a
where frictional force = μmg

11.32 "g" for Mars = 0.4 •9.8.

The period for a pendulum = $2\pi\sqrt{\frac{L}{g}}$

11.33 Usethe formula for the period of a pendulum to solve for T = 2s and T= 1 s

11.34 Substitute *L* for *x* when determing *k* for the spring

or in other words $k = \frac{mg}{x} = \frac{mg}{L}$

$T = 2\pi\sqrt{\frac{m}{k}} = 2\pi\sqrt{\frac{m}{\frac{mg}{L}}}$

You can take it from there

11.35 $y = A\sin 2\pi ft$ Substutute with you amplitude and your frequency.

Bye!