Worksheet simple harmonic motion

**1.** Name two types of potential energy that we've covered thus far.

**2.** In Hooke's law, the x represents a displacement, which is the change in position. A change between what two positions?

**3.**  Write a one word answer for the following two questions.

**(a)** If you're counting the number of cycles that occur during a set amount of time, what are you measuring?

**(b)** If you're counting the amount of time that occurs during a set cycle, what are you measuring?

**4.** Starting at a compressed amplitude, a chunk of copper oscillates on a string with a frequency of 15Hz and an amplitude of 0.2m .

**(a)** What is the copper's period?

**(b)** What is the copper's angular speed?

**(c)** What is the copper's maximum velocity?

**(d)** What is the copper's maximum acceleration?

**(e)** After 8s have passed, what is the copper's velocity?

**(f)** After 8s have passed, what is the copper's acceleration?

**(g)** After 8s have passed, how far from equilibrium is the copper?