Name _____ date _____ hour _____

The Physics Classroom – Pendulum

Log onto MOODLE, go to Simple Harmonics section and click on The Physics Classroom link to get to the website about pendulums. You may remember some of this information from previous chapters ☺

1. The mass that swings in a pendulum is called the _____
2. In a closed system, all the mechanical energy is _____. In other words, the total mechanical energy is the same as the pendulum swings.

Look at the animation:

3. When the bob is at the highest point in the swing, all the energy is _____
4. When the bob is at the bottom of the swing, most of the energy is _____
5. In between there is some PE and some KE. The PE of the bob mostly depends on its

   _____ as it swings.
6. The KE of the bob mostly depends on the _____ as it swings.

7. Write the formula for calculating GPE _____
8. Write the formula for calculating KE _____

   *Notice on the website you can use their numbers to practice the calculations and then click on the link to see the answer. Cool, eh?
9. Look at the animation. When does the bob have the highest velocity?

   _____
10. What is the average velocity of the bob at the point in #9? _____
11. What is the top height of the bob? _____

Chapter 11

12. We know the period of a pendulum largely depends on the _____ of the string.

13. The length of a pendulum is measured from the _____ to

    the _____ of the bob

14. Write the formula used to calculate the Period of a pendulum

15. By looking at the equation, if you shortened the length of a pendulum, what would happen to the period of that pendulum? Explain how you know this.

16. Calculate the period for a 2kg bob swinging on a 3m rope. Show work

17. Calculate the period for a 15g bob swinging on a 6m rope. Show work

18. What would be the period of pendulum #17 if it were on the moon? Show your work

*If you have time, check out the You Tube "Super Cool Group of Pendulums" video on MOODLE ☺