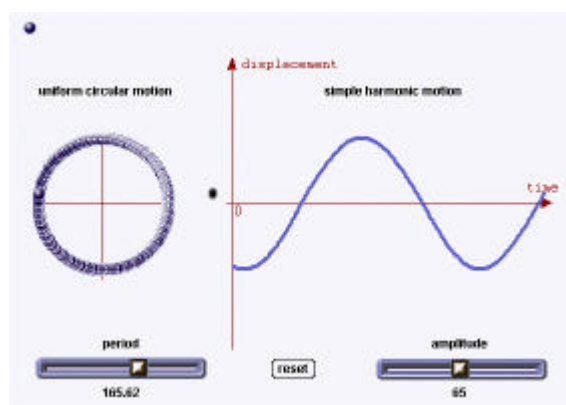


WORKSHEET : SIMPLE HARMONIC MOTION VS. CIRCULAR MOTION

Explore and play before starting on the following questions.

- Which quantity in the circular motion is equivalent to the amplitude of the shm? In which direction is the displacement a positive value?
- If the graph plotted is a pure cosine curve, what does that tell us about the starting situation?
- How do you obtain the velocity-time and the acceleration-time graphs given the displacement time graph? Can you write down the set of equations?
- If the kinetic and potential energies are to be calculated, what other quantity should be known?
- Are you able to obtain the time it takes for the particle to reach half its amplitude in any example? Is it necessary to know the units for the quantities involved?
- At which position(s) is the shadow moving the fastest? Slowest? At which position is the acceleration of the shadow greatest? Smallest?
- For the uniform circular motion, what is the acceleration of the particle at any given time? What is an expression for the acceleration?



Bugs? Comments?
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