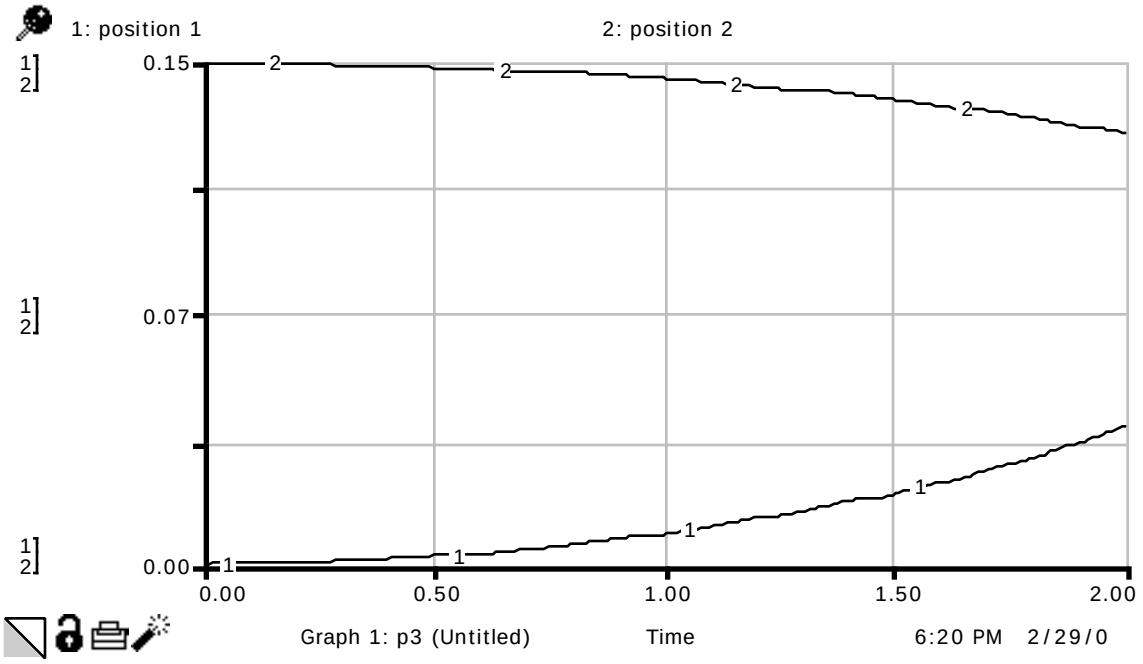
CoreModels Universal Gravitation Model
Student Assessment

Student Name:_____ Date: _____

Teacher Name:_____ Student Grade (circle one)

9th 10th 11th 12th

1. The graph below shows how the gravitational force between two objects, initially at rest, affects their positions and motion. Explain what the graph reveals about 1) the relative mass of the two objects, 2) the relative motion of the two objects and 3) the relative force with which each object attracts the other. The positions are measured in meters and time is in seconds.



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2. Computer models are tools for learning about the things they are meant to resemble. A model's usefulness in understanding a real world situation can be determined by examining the assumptions made in constructing the model and by comparing its output to actual observations in the real world.

- Determine the usefulness of the universal gravitation model by describing at least two similarities between the model and science lab or real world outcomes. Give specific details to support your answer.

- Describe at least one limitation of the universal gravitation model with respect to its ability to produce results consistent with real world behavior. Why does this limitation exist?

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