Physics Period Date Name

**Unit 6 | Simple Harmonic Motion | Spring Simulation**

**Directions**:

* Go to <https://phet.colorado.edu/en/simulation/mass-spring-lab> and begin the simulation. (Select the “Intro” simulation)
* Carry out the analysis below. ***Type your responses in a color other than black!***

**Analysis**:

1. Determine the spring constant *k* of Spring 1 when “Spring Constant 1” is set to **a)** the lowest tick mark, **b)** the 5th tick mark (including the one marked “small”), and **c)** the highest tick mark. **d)** Explain your method.

**a)**

**b)**

**c)**

**d)**

2. Determine the mass of the unknown hanging masses: **a)** purple, **b)** blue, and **c)** orange. **d)** Explain how you found these values.

**a)**

**b)**

**c)**

**d)**

3. Using Excel, make a graph of stretch vs. mass for Spring 1 for one of the three constants analyzed above. ***Paste an image of your graph below.*** How could the spring constant be determined in this graph?