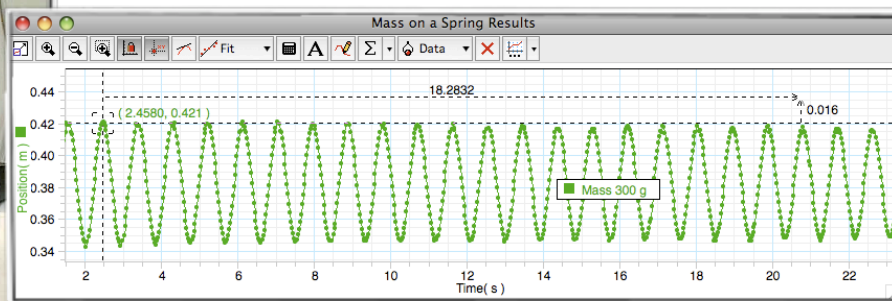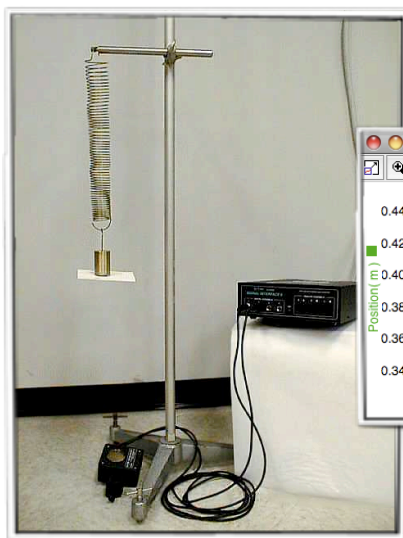**Name** _____ **Date** _____

Activity 3: Period of an Oscillating Mass on a Spring

Use the Pasco Motion Sensor to find the period of a mass on a spring.
Select two of the same springs from the Hooke's Law Activity.
For each spring, start with enough weight such that the masses can demonstrate regular harmonic motion. Record the motion of at least 20 oscillations. Record the time for exactly 20 "bounces". To find the period, simply divide by 20.

$$T = 2\pi\sqrt{\frac{m}{k}}$$

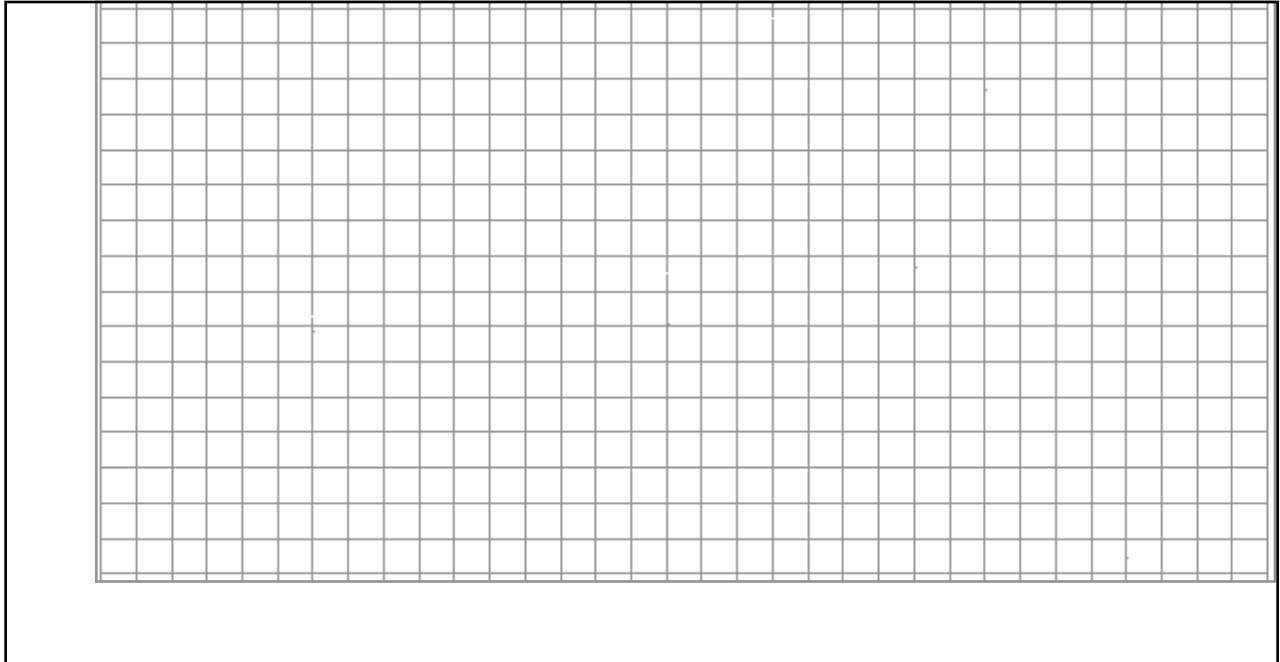| #	mass	spring A		spring B	
		(20) T	**T**	**(20) T**	**T**
1					
2					
3					
4					
5					
6					

Grade

Harmonic Motion

Name _____ Date _____

Graph Results

Create a graph for each of the two springs. Plot the period on the y axis and the *square root of the mass* on the x axis. When you find the slope of each line use the equation to solve for the spring constant of each spring.

Spring A

Spring B

Grade