

Applied Physical Science - Spring Lab Follow-Up Questions Name: _____

For all numerical solutions, show your work, starting with symbolic equations, and be sure to include units.

1. Please write Hooke's Law, and identify each variable. Give an example unit for each variable.
2. If you had a spring with an initial tension of 10N and a spring constant of 50N/cm. How much force would you have to apply to it in order to stretch it 10cm?
3. A spring has an initial tension of 5N and an unstretched length of 20cm. It takes 50N to stretch it to 30cm. What is its spring constant?
4. Spring A has a spring constant of 40N/cm and spring B has a spring constant of 80N/cm. What is their combined (equivalent) spring constant if used in *parallel*?
5. Spring A has a spring constant of 40N/cm and spring B has a spring constant of 80N/cm. What is their combined (equivalent) spring constant if used in *series*?
6. Write a couple of paragraphs explaining how you found the spring constant of a spring. Include a sketch of the apparatus you used, and be sure to explain how you interpreted the graph of your data (you should embed at least one of your MS Excel graphs into these paragraphs).