



Assignment:

In the lab, you are given three springs of different sizes and materials. You perform an experiment to find out their spring constant.

These are the results you obtained:

Spring # 1							
mass (kg)	0	1	2	3	4	5	6
elongation (cm)	0	1.0	2.0	3.0	4.0	5.0	6.0
Spring # 2							
mass (kg)	0	5	10	15	20	25	30
elongation (cm)	0	10.0	20.0	30.0	40.0	50.0	60.0
Spring # 3							
mass (kg)	0	10	20	30	40	50	60
elongation (cm)	0	1.0	2.0	3.0	4.0	25.0	36.0

Questions:

- a) Plot a graph for each spring (on the same paper) to show the relationship between Force and Elongation
- b) Calculate the spring constant for each spring
- c) Which Spring (s) stretch linearly? How can you tell?
- d) How much will Spring #2 stretch if you apply a force of 270 N?
- e) If you wanted Spring #3 to stretch linearly by 10 cm, what maximum force would you have to apply to it?

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