Report Sheet

HOOKE'S LAW

Data:

Distance (cm)	Force (N)
.5	1.5
1	2.5
1.5	3.0
2	4.0
2.5	4.5

Distance (cm)	Force (N)
.5	1
1	1.5
1.5	1.8
2	2.0
2.5	2.5

Spring constants: 1.5 N/cm .7 N/cm (include units!)

Include a graph of distance on the x-axis vs. force on the y-axis with both data sets on the same plot, including linear fits.

Questions:

1) Do you have reason to believe that each rubber band is following Hooke's law? Cite actual experimental data to support the claim.

yes, we have double the length of the rubber band so we can say we should have halve the force which is true going from 1.5 N/cm to .7 N/cm

2) What does a comparison of the two data sets show about the relative stiffness of the two rubber bands?

In the first chart the stiffness is much greater and we will need double the force as the second (two bands) "spring" to go the same distance.