

Forces

3. Contact Forces

CONCEPT 3

TEST YOURSELF

TENSION AND COMPRESSION

KNOW

- Q1 Name some materials that can be noticeably stretched or compressed and show elastic behaviour.
- Q2 Name materials that show non-elastic behaviour when they are compressed or stretched.

APPLY

- Q3 Name some brittle materials.
- Q4 (a) Plot a line graph to display the data in the table below.
 (b) Describe what your graph shows about how the force applied effects the spring.
 (c) Identify the independent and dependant variable in this experiment.
 (d) From your graph what do you notice about the compression when a force of 60N is applied, compared to smaller forces.
 (e) What could explain this difference?

Force applied (N)	Length the spring has been extended by (cm)
0	0
10	3.1
20	6.2
30	9.3
40	12.4
50	15.5
60	26.1

EXTEND

- Q5 Why might not a cushion work as well if it was a) too soft or b) too hard?
- Q6 Explain why springs are particularly suitable for use in weighing devices and force meters.
- Q7 Suggest why a climbing robe would be less effective if it had no elasticity at all.