



Copy and complete these statements to make a summary of this chapter. The missing words are on the right.

- 1 Forces are pushes or _____. You can use arrows to show their strength and _____.
- 2 Contact forces act on contact, and non-contact forces (eg _____ forces) act at a distance.
- 3 The forces on an object may be balanced or unbalanced. If they are _____, the object will start moving, speed up, slow down or change direction.
- 4 Forces are measured in _____ (N) using spring balances or scales.
- 5 _____ is a contact force that occurs when two things rub against each other. It slows down or prevents motion.
- 6 Friction depends on the roughness or smoothness of the _____, and the weight of the object.
- 7 There are several ways of reducing friction, eg ball bearings, _____ and polishing.
- 8 _____ is the force of attraction between any two objects, eg between the Sun and a planet. It depends on the masses of the objects.
- 9 The _____ of an object is the downwards pull of gravity on it. The _____ of an object is the amount of matter in it.

direction
friction
gravity
lubricants
magnetic
mass
newtons
pulls
surfaces
unbalanced
weight

REVIEW

- 1 Match the words with their correct meanings.

force	unit of force
carpet	reduce friction
friction	a pull from a large body
newton	push or pull
gravity	surface with large friction
spring balance	force that exists when one surface rubs on another
lubricants	produced when there is friction
heat	measures force

- 2 A 1 kg can of baked beans was suspended from a spring balance. The spring balance reading was 9.8 newtons. The can was bought by an astronaut, who took it to the Moon. Here the can was again suspended from the spring balance, and the reading was only 1.6 newtons.

Explain the different readings on the spring balance.

- 3 Give two examples of contact forces and two examples of non-contact forces.