

Worksheet: Exploring Forces

ISC · Class 8 · Science · 8 questions · 13 marks

Name: _____

Date: _____

Score: _____ / 13

Q1. Which of the following is a contact force? *[1 mark]*

- A) Friction
- B) Magnetic force
- C) Electrostatic force
- D) Gravitational force

Q2. The SI unit of weight is *[1 mark]*

- A) newton (N)
- B) kilogram (kg)
- C) gram (g)
- D) newton per kilogram (N/kg)

Q3. A coil of wire, a rubbed balloon, a bar magnet and the Earth can each exert a force at a distance. Which of these forces can ONLY attract, never repel? *[1 mark]*

- A) Gravitational force
- B) Magnetic force
- C) Electrostatic force
- D) All three can attract and repel

Q4. A spring balance has a range of 0 to 6 N, with bigger marks every 1 N and 4 small divisions between consecutive bigger marks. What is the smallest weight it can measure? *[2 marks]*

Q5. Assertion (A): A ball thrown vertically upwards has a force acting on it even at the topmost point of its path.
Reason (R): At the topmost point the ball is momentarily at rest. *[1 mark]*

- A) A is true but R is not the correct explanation of A
- B) Both A and R are true, and R is the correct explanation of A
- C) A is true but R is false
- D) A is false but R is true

Q6. A ball rolling on flat ground slows down and stops, although nothing visible is touching it apart from the ground. Explain how the chapter concludes that a force must be acting, without ever seeing that force. *[3 marks]*

Q7. Two identical wooden blocks are floating, one in water and one in a much denser liquid. Which statement is best supported by the chapter? *[1 mark]*

- A) Each block floats with the buoyant force on it equal to its own weight
- B) The block in the denser liquid weighs less
- C) Both blocks sink to the same depth
- D) The block in water experiences no buoyant force

Q8. Why does a spring balance carry a scale in grams alongside its scale in newton, and in what situation would the gram scale be wrong while the newton scale stayed right? *[3 marks]*
