

Resultant Force and Balanced Forces Questions for GCSE Physics



1. What is meant by the term *resultant force*?

2. What is meant by the term *balanced forces*?

3. In which units are forces measured?

4. What is Newton's First Law of motion?

5. What happens to the motion of an object when the forces are unbalanced?.



6. Explain why a car moving at a constant velocity has balanced forces acting on it.

7. A box sits on a table. Name the two forces acting on the box and state their directions.

8. A ball is falling with a weight of 50 N and an air resistance of 10 N upwards. Find the resultant force on the ball.

9. A person pushes a box with a force of 80 N, but friction opposes the motion with 50 N. Find the resultant force and state its direction.

10. A rocket engine produces a thrust of 1500 N while air resistance and gravity together produce a total opposing force of 1200 N. Calculate the resultant force.



11. A car experiences a driving force of 600 N and a frictional force of 600 N. What is the resultant force? What will happen to the car's motion?

12. A lift moves upward with a force from the cables of 4000 N and a weight of 3800 N acting downwards. Find the resultant force and describe the lift's motion.

13. A plane is flying at a constant height and velocity. Describe the four forces acting on the plane and explain why they are balanced.

14. A car slows down after the driver lifts off the accelerator. Explain why the car slows down in terms of resultant forces.

15. Explain, using Newton's First Law, why passengers lurch forward when a car suddenly stops.

