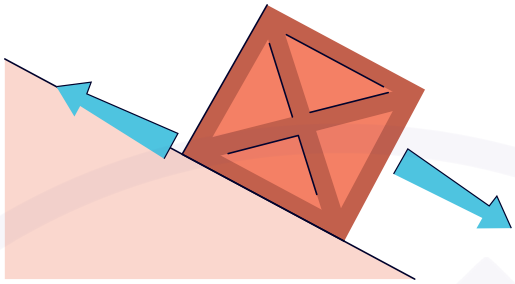
FORCES AND MOTION

Key Concepts

- A force is a push or pull acting on an object.
- Motion is the movement of an object from one place to another.



Key Facts to Remember

- Forces can change the speed, direction, or shape of an object.
- Balanced forces mean no change in motion; unbalanced forces cause acceleration or deceleration.
- The unit of force is the newton (N).
- Speed = Distance ÷ Time.
- Friction and air resistance are examples of opposing forces.
- Gravity pulls objects towards the Earth at 9.8 m/s^2.
- The resultant force is the overall force acting on an object.
- Mass is measured in kilograms (kg); weight is measured in newtons (N).

Quick Questions

1. What is the unit of force?
2. What type of force opposes motion?
3. What happens to an object when forces are balanced?
4. Define resultant force.
5. Write the formula for speed.
6. What is the difference between mass and weight?
7. Name two examples of contact forces.
8. What is the acceleration due to gravity on Earth?

Fun Fact

Astronauts on the International Space Station are in freefall, which makes them float!