

Types of Motion

Chapter 5: Measurement of Length and Motion · Topic 3

Key Concept

Some motions combine more than one type — for example, a ceiling fan shows rotational motion (spinning around its centre) while a moving car's wheels show both rotational motion (spinning) and rectilinear motion (moving the car forward). Understanding types of motion helps explain everyday phenomena, from why a Ferris wheel moves in a circle to why a bouncing ball shows periodic motion as it repeatedly rises and falls.

Quick Revision Notes

- Rectilinear motion: movement in a straight line (e.g., a car on a straight road).
- Circular motion: movement along a circular path (e.g., a clock's hand tip).
- Rotational motion: spinning around its own axis (e.g., a spinning top).
- Periodic motion: repeats at regular intervals (e.g., a swinging pendulum).

Practice Questions

- 1 Give one example each of rectilinear and periodic motion from your surroundings.
- 2 Explain why a moving car's wheels show two types of motion at once.
- 3 Classify the motion of a Ferris wheel and explain your reasoning.