

Measuring Time

Chapter 8: Measurement of Time and Motion · Topic 1

Key Concept

Historically, before modern clocks, people relied on natural events like the position of the Sun, or devices like a simple pendulum, whose regular back-and-forth swing (at a fixed time period for a given length) formed the basis of early mechanical clocks. Galileo first noted that a pendulum's swing period depends on its length, not its weight, a discovery that led to the invention of the pendulum clock, a major improvement in timekeeping accuracy.

Quick Revision Notes

- Standard time units: seconds, minutes, hours.
- A stopwatch measures short, precise time intervals.
- Historical timekeeping used sundials, sand clocks, and pendulums.
- Galileo discovered a pendulum's swing period depends on its length, not its weight.

Practice Questions

- 1 Name two instruments used to measure time.
- 2 Explain Galileo's discovery about the pendulum and its importance.
- 3 Why might a sundial be unreliable for measuring time at night or on a cloudy day?