

CLASS 7

SCIENCE

EXTRA QUESTIONS

Extra Questions for Class 7 Science Chapter 8: Measurement of Time and Motion

Fresh practice questions for Class 7 Science Chapter 8 "Measurement of Time and Motion", reinforcing speed calculations and motion concepts. These Class 7 Science Chapter 8 important questions are handy for last-minute exam practice.

Contents

Class 7 Science Chapter 8 – Solutions and Notes

Fresh practice questions for Class 7 Science Chapter 8 “Measurement of Time and Motion”, reinforcing speed calculations and motion concepts. These Class 7 Science Chapter 8 important questions are handy for last-minute exam practice.

Q1. A cyclist covers 300 m in 25 seconds. Find the cyclist's speed in both m/s and km/h.

Answer: Speed = $300/25 = 12$ m/s. In km/h: $12 \times 18/5 = 43.2$ km/h

Q2. Assertion-Reason — Assertion (A): A car moving through a busy market at varying speeds is in non-uniform...

Assertion (A): A car moving through a busy market at varying speeds is in non-uniform motion.

Reason (R): Non-uniform motion means the object covers unequal distances in equal time intervals.

Answer: Both A and R are true, and R correctly explains A.

Q3. Convert a speed of 90 km/h into m/s.

Answer: $90 \times 5/18 = 25$ m/s

Q4. Spot the error — A student says: "Since two runners finish a 200m race in different times, we can't tell..."

A student says: “Since two runners finish a 200m race in different times, we can’t tell who was faster without knowing their speeds.” Identify the error.

Answer: This statement is actually incorrect reasoning to flag as an error to fix: for races of the **same distance**, the runner with the **shorter time** is automatically the faster one – there’s no need to calculate speed separately, since time and speed are inversely related when distance is fixed.

Q5. HOTS — Two cars start from the same point. Car A travels at a constant 60 km/h. Car B...

Two cars start from the same point. Car A travels at a constant 60 km/h. Car B alternates between 80 km/h and 40 km/h every hour. After 2 hours, which car has travelled further, and is either car in uniform motion?

Answer: Car A: $60 \times 2 = 120$ km (uniform motion, constant speed). Car B: $80 + 40 = 120$ km over 2 hours (non-uniform motion, since its speed changes). Both cars travel the **same total distance (120 km)**, but only Car A is in uniform motion.

Q6. A runner's average speed over a 10 km race is 12 km/h. How long did the race take?

Answer: Time = Distance/Speed = $10/12 = 5/6$ hour = **50 minutes**

Q7. Explain why a candle clock or water clock would be less accurate for measuring time than a modern digital clock.

Answer: Candle clocks and water clocks depend on physical processes (wax burning at a roughly constant rate, or water dripping at a roughly constant rate) that can be affected by external factors like temperature, wind, humidity, or the exact size of the opening, making them far less precise and consistent than a digital

clock, which uses a highly stable electronic oscillator to measure time.

Q8. A train covers the first 100 km in 1 hour and the next 100 km in 1.5 hours. Is this uniform motion? Find its average speed for the full 200 km.

Answer: Since the train takes different times to cover equal distances, this is **non-uniform motion**. Total time = $1 + 1.5 = 2.5$ hours. Average speed = $200 / 2.5 = 80$ km/h.

Q9. If light travels at approximately 300,000 km/s, how long does it take light to travel 1,500,000 km?

Answer: Time = Distance/Speed = $1,500,000 / 300,000 = 5$ seconds

Q10. A walker moves 4 km in the first hour, 4 km in the second hour, and 4 km in the third hour. Classify this motion and explain your reasoning.

Answer: This is **uniform motion**, since the walker covers equal distances (4 km) in each equal time interval (1 hour), meaning their speed remains constant throughout.

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Revision Notes: [Class 7 Science Chapter 8 Revision Notes](#)

Class 7 Science Chapter 8 – Solutions and Notes

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