Al Amal Learning Center

Class 9 Physics Chapter 2 Kinematics MCQ Quiz Online | Level 2

Class 9 Physics · Chapter 2: Kinematics

Name: _____ Date: _____ Score: _____ / 46

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1. A car moves at 54 km/h. Its speed in m/s is:

A) 15 m/s
B) 194.4 m/s
C) 1.5 m/s
D) 54 m/s

2. A speed of 25 m/s in km/h is:

A) 6.94 km/h
B) 25 km/h
C) 90 km/h
D) 250 km/h

3. A train moves at 144 km/h. Its speed in m/s is:

A) 400 m/s
B) 40 m/s
C) 4 m/s
D) 518.4 m/s

4. Usain Bolt ran 100 m in 9.58 s. His average speed is:

A) 0.096 m/s
B) 9.58 m/s
C) 958 m/s
D) 10.44 m/s

5. A car covers 150 m in 10 s. Its speed is:

A) 1500 m/s
B) 160 m/s
C) 15 m/s
D) 0.067 m/s

6. A train covers 120 km in 1.5 h. Its speed is:

A) 80 km/h
B) 180 km/h
C) 0.0125 km/h
D) 120 km/h

7. A cyclist moves at 12 m/s for 25 s. The distance covered is:

A) 2.1 m
B) 37 m
C) 0.48 m
D) 300 m

8. A ball moving at 35 m/s travels 17.5 m. The time taken is:

A) 2 s
B) 0.5 s
C) 612.5 s
D) 52.5 s

9. A train travels 18 km at a constant speed of 20 m/s. The time taken is:

A) 0.9 s
B) 90 s
C) 900 s
D) 3600 s

10. A girl walks 3 km west and then 4 km south. The magnitude of her displacement is:

A) 7 km
B) 5 km
C) 1 km
D) 12 km

11. A girl walks 3 km west and then 4 km south. The total distance covered is:

A) 5 km
B) 1 km
C) 12 km
D) 7 km

12. A boy walks 6 km east and then 8 km north. The magnitude of his displacement is:

A) 10 km
B) 14 km
C) 2 km
D) 48 km

13. An athlete runs 3 complete laps of a 400 m track. The distance covered is:

A) zero
B) 400 m
C) 1200 m
D) 800 m

14. A bus covers 100 km in 2 h and then 80 km in 3 h. Its average speed for the whole journey is:

A) 36 km/h
B) 40 km/h
C) 45 km/h
D) 90 km/h

15. A cyclist covers 300 m at 5 m/s and then another 300 m at 10 m/s. Her average speed is:

A) 7.5 m/s
B) 6.67 m/s
C) 15 m/s
D) 5 m/s

16. The speed of sound in air is 343 m/s. The distance sound travels in 3 s is:

A) 114.3 m
B) 346 m
C) 1029 m
D) 3430 m

17. The Sun is 1.5 × 10^11 m from the Earth. Light travels at 3 × 10^8 m/s. Light takes how long to reach the Earth?

A) 5 s
B) 50 s
C) 5000 s
D) 500 s

18. A car undergoes a displacement of 600 m in 40 s. Its average velocity is:

A) 15 m/s
B) 20 m/s
C) 24 m/s
D) 0.067 m/s

19. A car travels a curvy track of length 800 m in 40 s. Its average speed is:

A) 15 m/s
B) 20 m/s
C) 32 000 m/s
D) 0.05 m/s

20. A horse moves 60 m to the right in 3 s and then 30 m back in 2 s. Its average velocity is:

A) 18 m/s
B) 35 m/s
C) zero
D) 6 m/s

21. A car increases its velocity from 0 to 20 m/s in 5 s. Its acceleration is:

A) 100 m/s^2
B) 25 m/s^2
C) 4 m/s^2
D) 0.25 m/s^2

22. A cheetah increases its speed from zero to 24 m/s in 3 s. Its acceleration is:

A) 8 m/s^2
B) 72 m/s^2
C) 0.125 m/s^2
D) 27 m/s^2

23. A car slows down from 30 m/s to 10 m/s in 4 s. Its acceleration is:

A) 5 m/s^2
B) -5 m/s^2
C) 10 m/s^2
D) -10 m/s^2

24. A car moving at 10 m/s has an acceleration of 2 m/s² for 10 s. Its final velocity is:

A) 20 m/s
B) 12 m/s
C) 30 m/s
D) 100 m/s

25. A cyclist has an acceleration of 2 m/s² for 5 s. The change in velocity is:

A) 2.5 m/s
B) 7 m/s
C) 0.4 m/s
D) 10 m/s

26. A vehicle with an acceleration of 4 m/s² changes its speed from 5 m/s to 25 m/s. The time taken is:

A) 5 s
B) 7.5 s
C) 20 s
D) 80 s

27. A girl on a racing bicycle moving at 50 km/h stops uniformly in 60 s. Her acceleration is:

A) 0.23 m/s²
B) -0.23 m/s²
C) -13.89 m/s²
D) 0.83 m/s²

28. A car moves from rest to 20 km/h in 10 s. Its acceleration is:

A) 2 m/s²
B) 5.56 m/s²
C) 0.56 m/s²
D) 200 m/s²

29. A stone is dropped from a cliff. Its speed after 4 s is (g = 9.8 m/s²):

A) 2.45 m/s
B) 9.8 m/s
C) 19.6 m/s
D) 39.2 m/s

30. A freely falling body starts from rest. It reaches a speed of 49 m/s after:

A) 5 s
B) 0.2 s
C) 480.2 s
D) 49 s

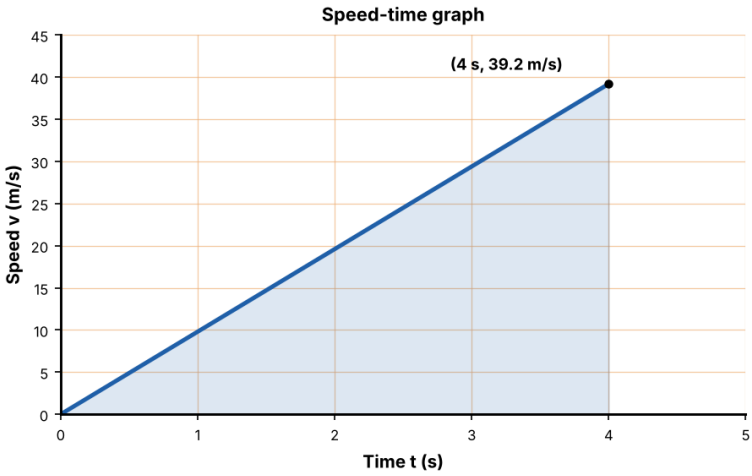
31. A ball is thrown straight up and takes 2 s to reach the top. Its speed of projection was:

A) 4.9 m/s
B) 19.6 m/s
C) 9.8 m/s
D) 39.2 m/s

32. A block dropped from a building strikes the ground at 78.4 m/s. The time taken to fall is:

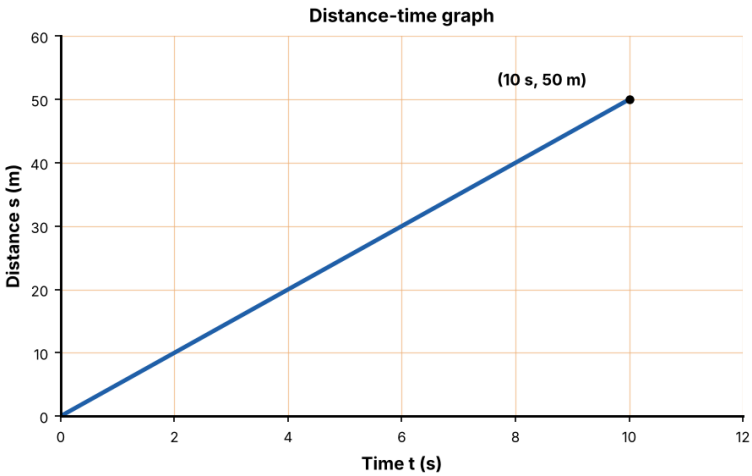
A) 0.125 s
B) 768.3 s
C) 8 s
D) 80 s

33. The speed-time graph of a stone dropped from rest is a straight line reaching 39.2 m/s at 4 s. The distance fallen is:



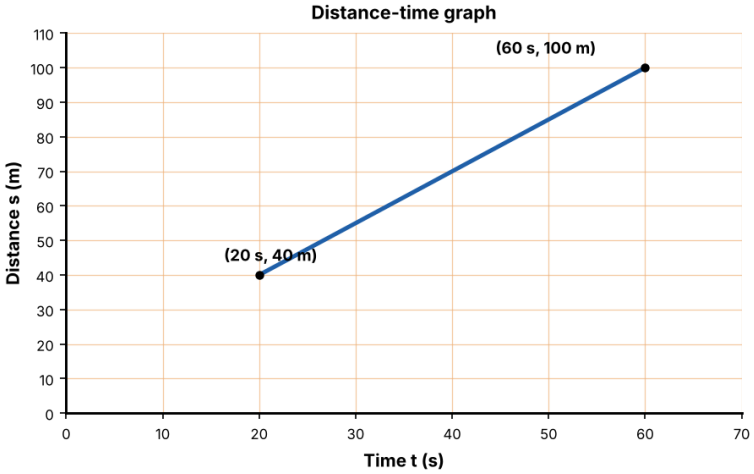
A) 156.8 m
B) 39.2 m
C) 19.6 m
D) 78.4 m

34. A distance-time graph is a straight line from (0 s, 0 m) to (10 s, 50 m). The speed is:



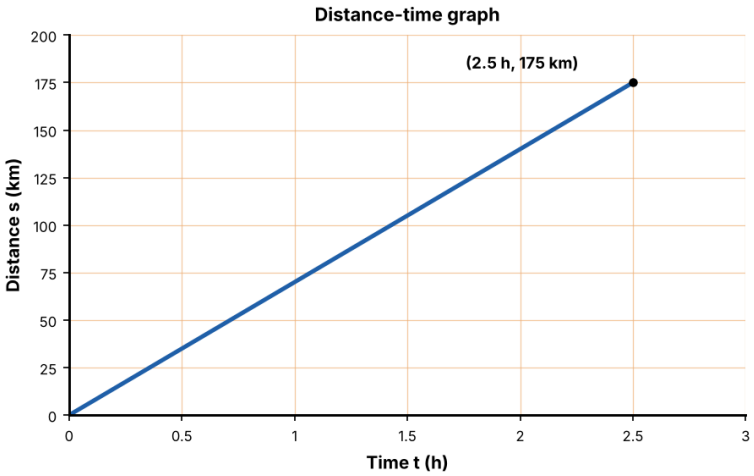
A) 5 m/s
B) 500 m/s
C) 0.2 m/s
D) 60 m/s

35. A distance-time graph passes through the points (20 s, 40 m) and (60 s, 100 m). The speed is:



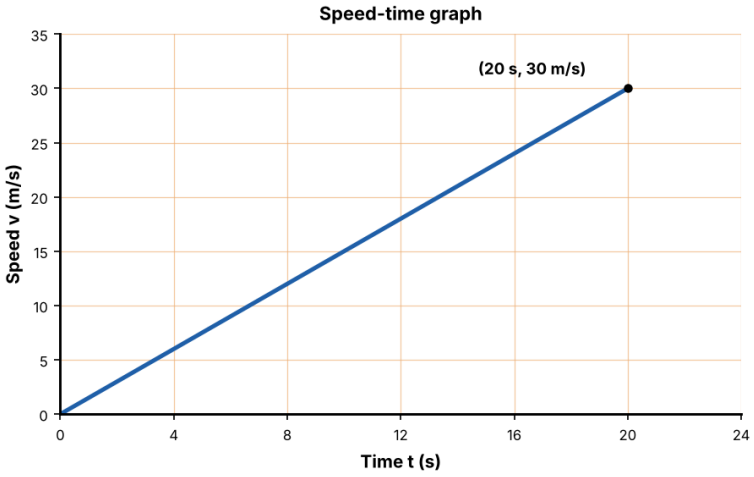
A) 2.5 m/s
B) 1.5 m/s
C) 0.67 m/s
D) 4 m/s

36. A car covers 175 km in 2.5 h as shown on a distance-time graph. Its speed is:



A) 437.5 km/h
B) 175 km/h
C) 70 km/h
D) 0.014 km/h

37. A speed-time graph rises from 0 to 30 m/s in 20 s. The acceleration is:

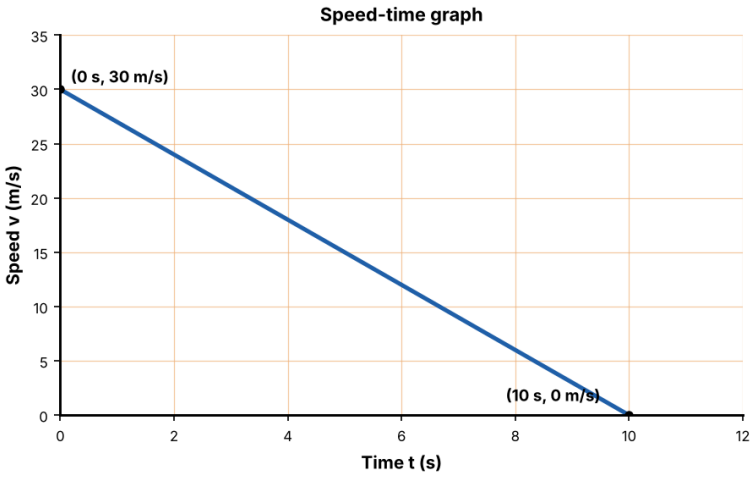


A) 0.67 m/s²
B) 50 m/s²
C) 600 m/s²
D) 1.5 m/s²

38. A speed-time graph is a horizontal line at 30 m/s for 30 s. The distance covered is:

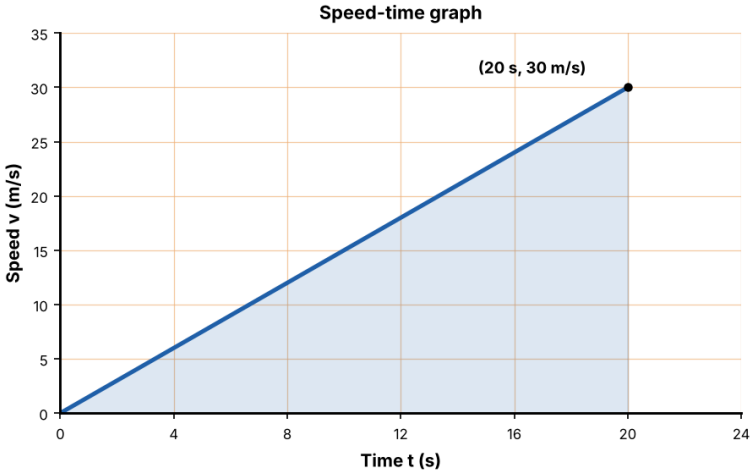
A) 900 m
B) 1 m
C) 60 m
D) 30 m

39. On a speed-time graph, the speed falls from 30 m/s to 0 in 10 s. The acceleration is:



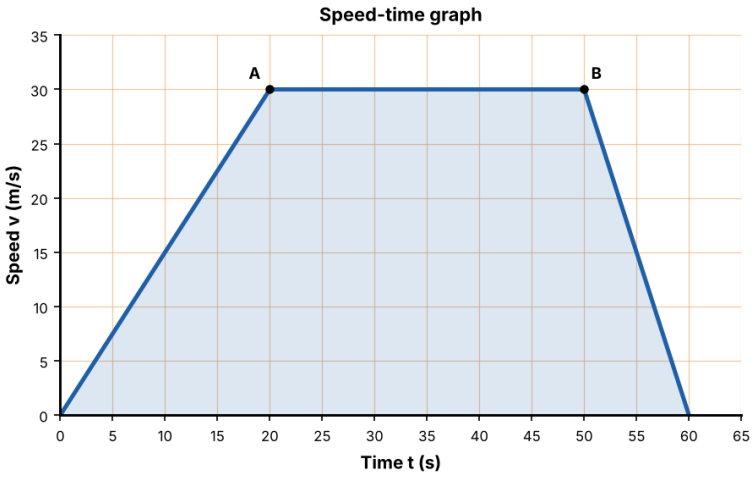
A) 3 m/s²
B) -3 m/s²
C) 300 m/s²
D) -0.33 m/s²

40. The speed-time graph of a car is a triangle with a base of 20 s and a height of 30 m/s. The distance covered is:



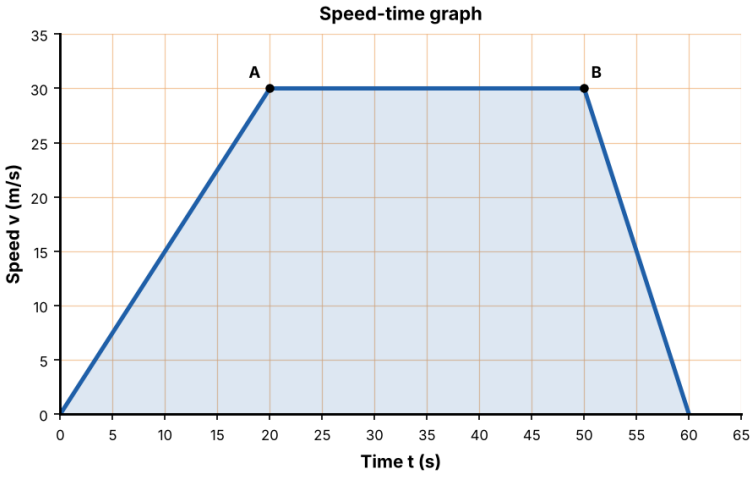
A) 600 m
B) 50 m
C) 300 m
D) 150 m

41. A car speeds up from 0 to 30 m/s in 20 s, moves at 30 m/s for 30 s, and then stops uniformly in 10 s. The total distance is:



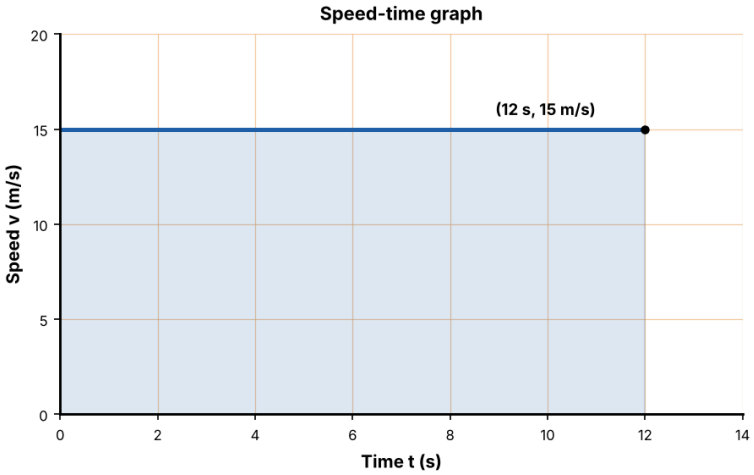
A) 900 m
B) 1050 m
C) 1800 m
D) 1350 m

42. For the journey in the previous question, the average speed is:



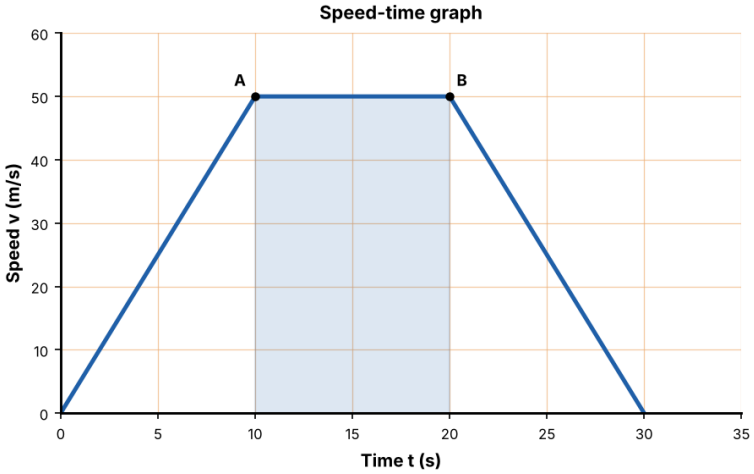
A) 22.5 m/s
B) 30 m/s
C) 45 m/s
D) 1.5 m/s

43. A speed-time graph is a horizontal line at 15 m/s for 12 s. The distance covered is:



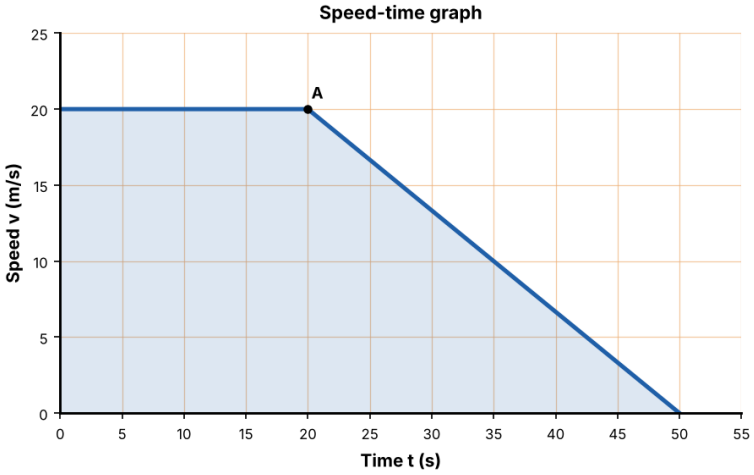
A) 27 m
B) 180 m
C) 3 m
D) 1.25 m

44. A car moves at a constant 50 m/s from 10 s to 20 s on a speed-time graph. The distance covered in this time is:



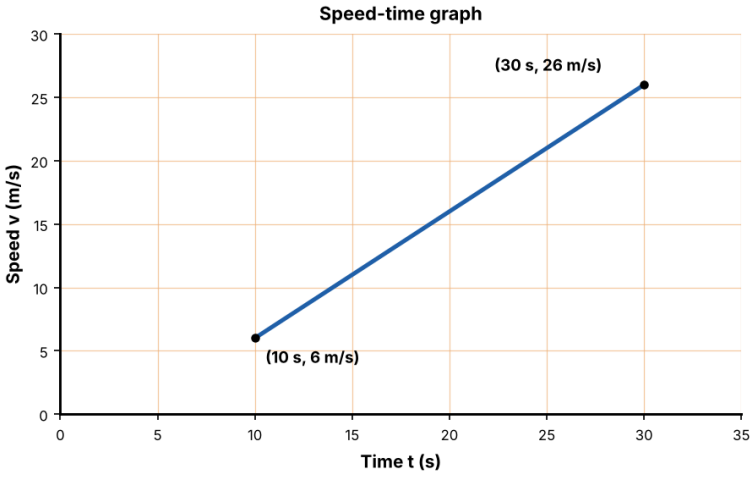
A) 50 m
B) 5 m
C) 500 m
D) 1000 m

45. A car moves at 20 m/s for 20 s and then comes to rest uniformly in 30 s. The total distance covered is:



A) 400 m
B) 1000 m
C) 500 m
D) 700 m

46. A speed-time graph passes through (10 s, 6 m/s) and (30 s, 26 m/s). The acceleration is:



A) 1 m/s²
B) 20 m/s²
C) 0.05 m/s²
D) 32 m/s²

Answer key

1-A 2-C 3-B 4-D 5-C 6-A 7-D 8-B 9-C 10-B

11-D 12-A 13-C 14-A 15-B 16-C 17-D 18-A 19-B 20-D

21-C 22-A 23-B 24-C 25-D 26-A 27-B 28-C 29-D 30-A

31-B 32-C 33-D 34-A 35-B 36-C 37-D 38-A 39-B 40-C

41-D 42-A 43-B 44-C 45-D 46-A