sns academy

an International CBSE Finger Print School
Coimbatore

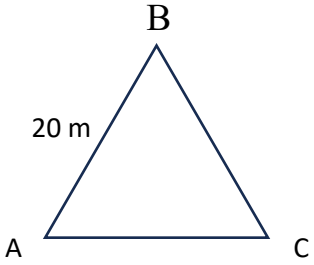
Name : **Date :**

Grade : **Worksheet** **Submission Date :**

Subject : Physics **Parent's sign :**

Time and Motion

1. A boy moves along an equilateral triangular track of side 20m as shown in the figure. He starts from point A and reaches point C through point B. The distance travelled and displacement of the boy is



(a) 40 m, 40 m (b) 20 m, 20 m (c) 20 m, 40 m (d) 40 m, 20 m

2. A train leaves a station X at 6:00 am and reaches another station Y at 12:00 pm. If its speed is 120 km/h, the distance between X and Y is

(a) 720 km (b) 120 km (c) 800 km (d) 750 km

3. A bus travels the first 100 m in 30 s and the next 100 m in 10 s. What is the average speed of the bus?

(a) 2 ms^{-1} (b) 5 ms^{-1} (c) 6 ms^{-1} (d) 4 ms^{-1}

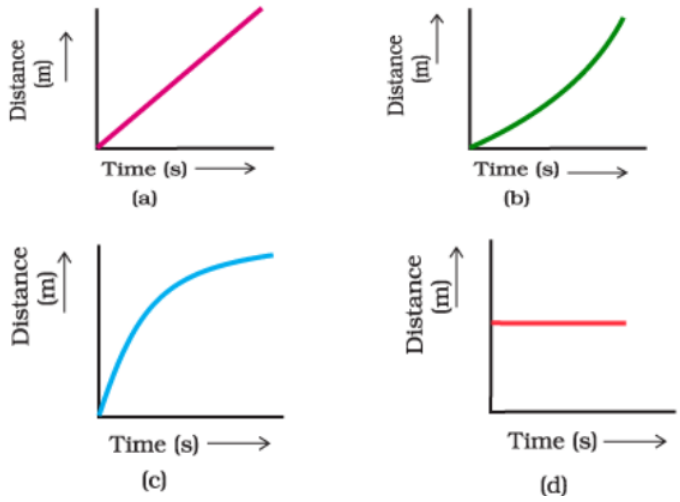
4. Two pendulums A and B of masses 20 g and 40 g respectively, having same length are set into oscillations. The time period of oscillation is

(a) same for A and B (b) greater for B
(c) greater for A (d) none of these

5. Two pendulums A and B of length 20 m and 10 m are under oscillation. Then

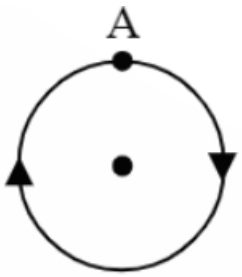
(a) their time period is same
(b) time period of A is greater than B
(c) time period of B is greater than A
(d) time period depends on the mass of the bobs

6. The distance-time graph for a uniform motion is



(a) A (b) b (c) c (d) d

7. Selvi goes for a morning walk in the park near her house. She starts from point 'A' walks a circular path of radius 7m and returns to the same point A. What is the displacement and the distance she has walked?

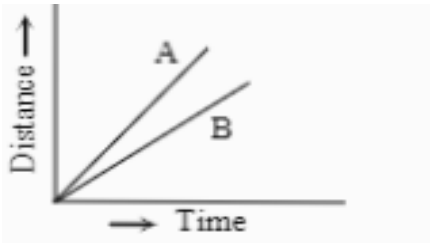


(a) 22m, 14m (b) 14m, 22m
(c) 0m, 22m (d) 22m, 0m

8. A car at 6:00 am is moving at a constant speed of 2 km/ min and the odometer reading recorded is 52,320 km. What would be the odometer reading at 8:00 am?

(a) 52, 600 (b) 52,660 (c) 52,400 (d) 52,560

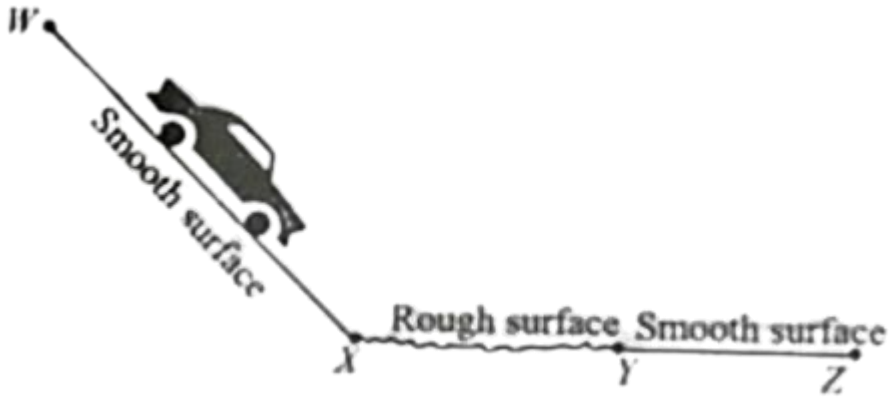
9. The distance-time graph of two vehicles A and B are given. Which one of them is moving faster?



(a) A
(b) B
(c) Both are having same speed
(d) Insufficient data

10. A speed of 5 km/h is equal to
(a) 1.38 m/s
(b) 83.33 m/min
(c) both (a) and (b)
(d) none of these

11. A car slides down on inclined surface WX and moves horizontally along XZ as shown in the figure. XY is a rough surface while WX and YZ are frictionless. The car moves with a constant speed on its path between which of the following two points?



(a) X and Y
(b) Y and Z
(c) W and X
(d) X and Z

12. A simple pendulum takes 32 s to complete 20 oscillations. What is the time period of the pendulum?

13. If a car travels 216 kilometres in 4 hours, calculate the speed.