



Work Sheet
on
Time, Speed & Distance

Aptitude Training Course

BOARD INFINITY

Work-Sheet on Time, Speed & Distance

- Ratio between speeds of 2 trains is 5:3. If the first train runs 350 km in 2 hours, then what is the speed of the second train?
(a) 100 km/ph (b) 115 km/ph (c) 105 km/ph (d) 210 km/ph
- When a local train travels at a speed of 60 km/h, it reaches the destination on time. When the same train travels at speed of 50 km/h, it reaches its destination 15 minutes late. What is the length of journey?
(a) 75 km (b) 50 km (c) 60 km (d) 85 km
- A boat takes a circular route to travel a total distance of 24 km to reach its initial position. The speed of the boat in still water is 5 km/hr and the speed of the stream is 3 km/h. How much time (in hrs) does the boat travel upstream and downstream respectively?
(a) 12, 3 (b) 3, 12 (c) 5, 3 (d) 3, 5
- Two men A and B, 72 kms apart start walking towards each other at the same time. Speed of A is 4 kmph. Speed of B is 2 kmph in 1st hr, 2.5 in 2nd, 3 in 3rd and so on. When will they meet?
(a) In 7 hrs (b) at 35 kms from A (c) In 10 hrs (d) Midway
- A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/hr, then what is the length of the platform?
(a) 200 m (b) 240 m (c) 300 m (d) 864 m
- If I walk at 30 miles/hr I reach 1 hour before the reporting time and if I walk at 20 miles/hr I reach 1 hour late. Find the distance between 2 points and the exact time of reaching destination is 11 am then find the speed with which I have to walk to reach on time.

- (a) 100miles and 24 miles/hr (b) 120miles and 24 miles/hr
 (c) 120miles and 16 miles/hr (d) 100miles and 16 miles/hr
7. Boat goes downstream from P to Q in 2hrs, upstream in 6hrs and if speed of stream is 6kmph, then find the distance PQ
 (a) 6 km (b) 4 km (c) 10 km (d) None of these
8. A river runs at 4 km/hr. if the time taken by a man to row is boat upstream is thrice as the time taken by him to row it downstream then find the speed of the boat in still water.
 (a) 16 km/hr (b) 8 km/hr (c) 6 km/hr (d) 12 km/hr
9. A, B, C are running in the same direction around a circular track. The track is marked with numbers from 1 to 12, like the dial of a clock. The 12 numbers are uniformly spaced along the track. A overtakes B once at 5 and then the next time again at 9. A overtakes C once at 2 and then the next time again at 4. What is the ratio of B's speed to C's speed?
 (a) 29 : 17 (b) 2 : 1 (c) 35 : 17 (d) 5 : 4
10. Two trains are travelling from point A to point B such that the speed of first train is 60 kmph and the speed of second train is 15 kmph. What is the distance b/w A&B such that the slower train reached 5 hrs late compared to the faster?
 (a) 100 km (b) 150 km (c) 75 km (d) 60 km
11. A motorboat whose speed is 15 kmph in still water goes 30 kmph downstream and comes back in a total of 4hrs 30min. What is the speed of the stream?
 (a) 5 km (b) 3 km (c) 10 km (d) 12 km
12. 9. A man travelled a certain distance at the rate of 15 miles an hour and came back at the rate of 10 miles an hour. What is his average speed?
 (a) 12 miles an hour (b) 12.5 miles an hour (c) 13 miles an hour
 (d) Cannot be determined

13. A ship went on a voyage. After 180 miles a plane started with 10 times speed that of the ship. Find the distance when they meet from starting point.
(a) 185 miles (b) 190 miles (c) 200 miles (d) 220 miles
14. If the speed of a man is 45 Km per hour, then what is the distance travelled by him in 24 seconds?
(a) 240 m (b) 360 m (c) 300 m (d) 420 m
15. The speed of a train is 12 m/s and it takes 15 seconds to cross a telegraph post. What is the length of the train?
(a) 300 m (b) 250 m (c) 225 m (d) 180 m
16. The speed of a train is 15 m/s. the time it takes to cross a telephone pole is 10 seconds. What is the length of a train?
(a) 100 m (b) 1.5 km (c) 150 m (d) 200 m
17. What time does a train, 150 m in length and moving at a speed of 90 Kmph, takes to cross an electric pole?
(a) 4 second (b) 6 second (c) 5 second (d) 2 second
18. The speed of a train is 18 m/s. If the length is 540 m, then how long will it take to cross a man standing on a platform?
(a) 25 second (b) 60 second (c) 30 second (d) None of these
19. A train moving at a uniform speed crosses a platform 99m long in $13\frac{1}{2}$ seconds and an electric pole in 9 seconds. Find the length of the train?
(a) 194 m (b) 196 m (c) 198 m (d) 200 m
20. A train having a length of 400 m, travelling at a speed of 20 m/s, crosses a platform in one minute. What is the length of the platform?
(a) 2000 m (b) 800 m (c) 400 m (d) Cannot be determined
21. A train which is 350 m long passes a tunnel of length 550 m at a speed of 54 Km/hr in

- (a) 30 seconds (b) $23 \frac{1}{3}$ seconds (c) $36 \frac{2}{3}$ seconds (d) 60 seconds

22. A 310 m long train crosses a platform in one minute. If the speed of the train is 54 Km/hr, what is the length of the platform?

- (a) 690 m (b) 550 m (c) 590 m (d) 510 m

23. The speed of a train, 150 m long, is 88 Kmph. What time will it take to cross a platform 180 m long?

- (a) $11 \frac{1}{2}$ seconds (b) $10 \frac{1}{2}$ seconds (c) $13 \frac{1}{2}$ seconds (d) $14 \frac{1}{2}$ seconds

24. Walking at the rate of 4kmph a man covers certain distance in 2hr 45 min. Running at a speed of 16.5 kmph the man will cover the same distance in.

- (a) 12 min (b) 25 min (c) 40 min (d) 60 min

25. Two boys starting from the same place walk at a rate of 5kmph and 5.5kmph respectively. What time will they take to be 8.5km apart, if they walk in the same direction?

- (a) 17 hrs (b) 25 hrs (c) 31 hrs (d) 45 hrs

26. A car during its journey travels 40 minutes at a speed of 30 km/h, another 50 minutes at a speed of 60 km/h, and 1 hour at a speed of 30 km/h. Find the average speed of the car.

- (a) 45 km/hr (b) 40 km/hr (c) 36 km/hr (d) 48 km/hr

27. Two trains are running In opposite direction with the same speed. If the length of each train is 135 meters and they cross each other in 18 seconds, the speed of each train is

- (a) 29 km/hr (b) 35 km/hr (c) 27 km/hr (d) 54 km/hr

28. In a kilometer race, A beats B by 50 meters and B beats C by 75 meters. By how many meters does A beat C in the same race?

- (a) 135 m (b) 121.25 m (c) 142.5 m (d) 125 m

29. A motor boat whose speed is 15 km/h in still water goes 30 km downstream and comes back in four and a half hours. The speed of the stream is

- (a) 6 km/hr (b) 7 km/hr (c) 5 km/hr (d) 5.5 km/hr

30. A boat sails 15 km of a river towards upstream in 5 hours. How long will it take to cover the same distance downstream, if the speed of current is one-fourth the speed of the boat in still water:
- (a) 1.8 h (b) 3 h (c) 4 h (d) 5 h
31. A thief steals a car at 2.30pm and drives it at 60kmph. The theft is discovered at 3pm and the owner sets off in another car at 75kmph when will he overtake the thief
- (a) 5 pm (b) 6 pm (c) 5.30 pm (d) 4 pm
32. Excluding stoppages, the speed of the bus is 54kmph and including stoppages it is 45kmph, for how many min does the bus stop per hr?
- (a) 10 min (b) 15 min (c) 12 min (d) 11 min
33. A man takes 5hr 45min in walking to certain place and riding back. He would have gained 2hrs by riding both ways. The time he would take to walk both ways is?
- (a) 8 hr 45 min (b) 7 hr 45 min (c) 7 hr 40 min (d) 8 hr 30 min
34. A and B are two stations. A train goes from A to B at 64 km/h and returns to A at a slower speed. If its average speed for the whole journey is 56 km/h, at what speed did it return?
- (a) 48 km/hr (b) 49.77 km/hr (c) 30 km/hr (d) 47.46 km/hr
35. In a flight of 3000km, an aircraft was slowed down by bad weather. Its average speed for the trip was reduced by 100 km/hour and the time increased by one hour. Find the original duration of the flight.
- (a) 5 hrs (b) 6 hrs (c) 4 hrs (d) 10 hrs
36. In a race of 600 m, A can beat B by 60 m and in a race of 500 m, B can beat C by 50m.by how many meters will A beat C in a race of 400 m?
- (a) 78 m (b) 56 m (c) 76 m (d) 86 m
37. A train 300 m long and moving at a speed of 25 m/s can cross a man standing on a platform in

- (a) 60 seconds (b) 24 seconds (c) 75 seconds (d) 12 seconds

38. A man goes to a city at 60 Km/h and returns at 40 Km/h. If he takes 10 hours in all, then what is the distance between the city and the man's starting point?

- (a) 272 km (b) 280 km (c) 288 km (d) 240 km

39. A man covers the distance between A and B in 30 minutes and returns from B to A in 60 minutes. If the distance between A and B is 40 Km, then what is the average speed?

- (a) 26 km/h (b) $53 \frac{1}{3}$ km/h (c) $66 \frac{2}{3}$ km/h (d) 70 km/h

40. A person travels the distance between two places A and B in 48 minutes and returns from B to A in 36 minutes. If the distance between A and B is 70 Km. What is the average speed of the person?

- (a) 100 km/h (b) 204 km/h (c) 102 km/h (d) 196 km/h

41. A certain distance is covered at a certain speed. If half of the same distance is covered in double the time, then the ratio of the former speed to that of the latter is

- (a) 4 : 1 (b) 1 : 4 (c) 2 : 1 (d) 1 : 2

42. In a journey, one – third of the distance is covered at 30 Km/hr and the remaining at 40 Km/hr. What is the average speed for the entire journey?

- (a) 35 km/hr (b) 37.5 km/hr (c) 36 km/hr (d) 33.5 km/hr

43. A man can row a certain distance against the stream in six hours. However, he would take two hours less to cover the same distance with the current. If the speed of the current is 2 Km/h, then what is the speed of the man in still water.

- (a) 10 km/h (b) 12 km/h (c) 12 km/h (d) 8 km/h

44. A man can row downstream at 12 Km/h and upstream at 8 Km/h. Find the ratio of the speed of the current to the speed of the man in still water?

- (a) 1 : 5 (b) 5 : 4 (c) 25 : 16 (d) 16 : 25

45. A man can row at 12Kmph in still water and a river is flowing at 4 Kmph. How long will the man take to go to a place 1 Km downstream and return?
(a) 36 minutes (b) 24 minutes (c) 11.25 minutes (d) 18 minutes
46. A man can row at 12 Kmph in still water. He finds that it takes him thrice as much time to row up the river as it takes to row down the river. What is the speed of the current
(a) 6 kmph (b) 24 kmph (c) 48 kmph (d) 18 kmph
47. Walking at $\frac{3}{4}$ of his normal speed. Abhishek is 16 minutes late in reaching his office. The usual time taken by him to cover the distance between his home and his office is
(a) 48 minutes (b) 60 minutes (c) 42 minutes (d) 62 minutes
48. Ram and Bharat travel the same distance at the rate of 6 km per hour and 10 km per hour respectively. If Ram takes 30 minutes longer than Bharat, the distance travelled by each is
(a) 6 km (b) 10 km (c) 7.5 km (d) 20 km
49. A cat takes 5 leaps for every 4 leaps of a dog, but 3 leaps of the dog are equal to 4 leaps of the cat. What is the ratio of the speed of the cat to that of the dog?
(a) 11 : 15 (b) 15 : 11 (c) 16 : 15 (d) 15 : 16
50. Two planes move along a circle of circumference 1.2 km with constant speeds. When they move in different directions, they meet every 15 seconds and when they move in the same direction, one plane overtakes the other every 60 seconds. Find the speed of the slower plane.
(a) 0.04 km/s (b) 0.03 km/s (c) 0.05 km/s (d) 0.02 km/s
51. Two trains are running on parallel lines in the same direction at speeds of 40 Kmph and 20 Kmph respectively. The faster train crosses a man in the second train in 36 seconds. The length of the faster train is
(a) 200 m (b) 9185 m (c) 225 m (d) 210 m

52. Shyam and Vyom walk up an escalator (moving stairway). The escalator moves at a constant speed, Shyam takes three steps for every two of Vyom's steps. Shyam gets to the top of the escalator after having taken 25 steps. While Vyom (because his slower pace lets the escalator do a little more of the work) takes only 20 steps to reach the top. If the escalator were turned off, how many steps would they have to take to walk up?
- (a) 40 (b) 50 (c) 60 (d) 80
53. Rampur is 100 km from Sitapur. At 3 p.m. Bharat Express leaves Rampur for Sitapur and travels at a constant speed of 30 Kmph. One hour later, Laxman Mail leaves Sitapur for Rampur and travels at a constant speed of 40 Kmph. Each train makes one stop only at a station 10 km from its starting point and remains there for 15 min. Which train is nearer to Rampur when they meet?
- (a) Bharat Express (b) Laxman Mail
(c) Both are equidistant (d) None of these
54. There are 4 people who have to cross a stretch of 300 km. They normally run at a speed of 10 kmph. One of them has a bike that travels at 50 Kmph. The bike first takes one person alone and crosses the stretch while the other two keep running. Then he comes back without wasting time and picks up another person from the way, drives him across the stretch, and does the same for the last person. How long does this whole process take?
- (a) 24 hrs (b) 16 hrs (c) $56/3$ hrs (d) $58/3$ hrs
55. If a man cycles at 10kmph, then he arrives at a certain place at 1 p.m. If he cycles at 15 kmph, he will arrive at the same place at 11 a.m. At what speed must he cycle to get there at noon?
- (a) 11 kmph (b) 12 kmph (c) 12 kmph (d) 14 kmph
56. A car crosses a man walking at 6 kmph. The man can see the things up to 450 m only in one direction due to fog. He sees the car which was going in the same direction for 4.5 minutes. What is the speed of the car?
- (a) 9 kmph (b) 12.5 kmph (c) 12 kmph (d) 15 kmph

57. The wheel of an engine of 300 cm in circumference makes 10 revolutions in 6 seconds. What is the speed of the wheel (in km/h)?
(a) 18 (b) 20 (c) 27 (d) 36
58. A boat moves downstream 1 km in 5 minutes and upstream 1 km in 12 minutes. What is the speed of the current?
(a) 4.5 kmph (b) 3.5 kmph (c) 2 kmph (d) 2.5 kmph
59. A passenger train covers the distance between stations X and Y, 50 minutes faster than a goods train. Find this distance if the average speed of the passenger train is 60 kmph and that of goods train is 20 kmph.
(a) 20 kms (b) 25 kms (c) 45 kms (d) 40 kms
60. On a 20 km tunnel connecting two cities A and B there are three gutters. The distance between gutter G1 and G2 is half the distance between gutter G2 and G3. The distance from city A to its nearest gutter, gutter 1 is equal to the distance of city B from gutter 3. On a particular day the hospital in city A receives information that an accident has happened at the third gutter. The victim can be saved only if an operation is started within 40 minutes. An ambulance started from city A at 30 km/hr and crossed the first gutter after 5 minutes. If the driver had doubled the speed after that, what is the maximum amount of time the doctor would get to attend the patient at the hospital? Assume 1 minute is elapsed for taking the patient into and out of the ambulance.
(a) 4 minutes (b) 2.5 minutes (c) 1.5 minutes
(d) Patient died before reaching the hospital