



MATHS

BOOKS - PEARSON IIT JEE

FOUNDATION

TIME AND DISTANCE

Example

1. Express 54 km / h in m/s



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2. A car can cover 350 km in 4 h. If its speed is decreased by $12\frac{1}{2}$ kmph, then how much time does the car take to cover a distance of 450 km ?



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3. A person covers a certain distance at a certain speed. If he increases his speed by 25 % then he takes 12 min less to cover the

same distance . Find the time taken by him initially to cover the distance travelling at the original speed



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4. A car covers a certain distance travelling at a speed of 60 kmph and returns to the starting point at a speed of 40 kmph. Find the average speed for the entire journey



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5. A worker reaches his work place 15 min late when he walks at a speed of 4 km/h from his house. The next day he increases his speed by 2km/h and reaches his work place on time. Find the distance from his house to his workplace



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6. A person leaves his house and travelling at 4 kmph reaches his office 10 min late. Had he travelled at 6 kmph, he would have reached 20

min early. Find the distance from his house to the office



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7. Rakes travelled from Hyderabad to Mumbai in his car at a certain speed. He would have reached Mumbai $2\frac{1}{2}$ h early if he had driven his car at 75 km/h . If the distance between Hyderabad and Mumbai is 750 km, then find the speed at which Rakes travelled



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8. Two buses start from a point such that one bus travelling at 80 km/h reaches its destination 2 h before the other but which travels at 60 km/h . However, the distance travelled by the bus travelling at 60 km/h is 40 km more than that of the other bus. Find the distance travelled by the bus which is travelling at 80 km/h



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9. What is the time taken by a 180 m long train running at 54 km/h to cross a man standing on a platform ?



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10. How long will a train 100 m long and travelling at a speed of 45 kmph take to cross a platform of length 150 m ?



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11. Find the length of a bridge which a 120 m long train , travelling at 54 kmph, completely passes in 30 s



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12. Find the time taken by a train 150 m long , running at a speed of 63 kmph to cross another train of length 100 m running at a speed of 45 kmph in the same direction



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13. A train crosses two persons who are cycling in the same direction as the train in 12 s and 18 s , respectively. If the speeds of the two cyclists are 9 kmph and 18 kmph, respectively , then find the length and the speed of the train



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14. Two train running at 45 kmph and 54 kmph cross each other in 12 s when they run in opposite directions. When they run in the

same direction , a person in the faster train observes that he crosses the other train in 32 s . Find the lengths of the two trains



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15. Two trains of lengths 150 m and 250 m run on parallel lines, When they run in the same direction, it takes 20 s to cross each other and when they run in the opposite direction, it taken 5 s . Find the speeds of the two trains



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16. A train 100 m long crosses a telegraphic post in 10 s . Another train of the same length crosses a platform 125 m long in 15 s. What is the difference of the distance covered by the two trains in 3 h ?



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17. A boat travels 24 km upstream in 6 hours and 20 km downstream in 4 hours . Then the

speed of boat in still water and the speed of water/current are respectively



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18. A man can row 8 km in 1 h in still water . If the speed of the water current is 2 kmph and it takes 3 h for him to go from a point P to Q and return to P . then find the distance PQ



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19. A man can row a distance of 6 km in 1 h in still water and he can row the same distance in 45 min with the current . Find the total time taken by him to row 16 km with the current and return to the starting point .



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20. The distance travelled by a boat downstream is $1\frac{1}{2}$ times the distance travelled by it upstream in the same time . If

the speed of the stream is 3 kmph , then find the speed of the boat in still water



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21. A man can row $\frac{1}{3}$ of a kilometre downstream in 5 min and return to the starting point in another 10 min. Find the speed of the man in still water



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22. A boat covers a round trip journey in a river in a certain time . If its speed in still water is doubled and the speed of the stream is tripled, it would take the same time for the round trip journey. Find the ratio of the speed of boat in still water to the speed of the stream ?



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23. In a race of 1000 m, A beats B by 50 M OR 5

s

Find (i) B's speed

(ii) A's speed

(iii) The time taken by A to complete the race



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24. Rakesh runs $1\frac{1}{3}$ times as fast as Mukesh. In

a race , If Rakesh gives a head start of 60 m to

Mukesh, then after running for how many metres does Rakesh meet Mukesh ?



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25. In a 100 m race, Tina beats Mina by 20 m, and in the the same race, Mina beats Rita by 10 m By what distance does Tina beat Rita ?



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26. In a 500 m race, the ratio of speeds of two runners , P and Q is 3 : 5 .P has a start of 200 m. Who wins the race and by what distance does he win ?



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27. In an 1800 m race, Girish beats Harish by 50 s .In the same race, Harish beats Suresh by 40 s. If Girish beats Suresh by 450 m, then by what distance does Girish beat Harish ? (in m)





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Test Your Concepts Very Short Answer Type Questions

1. $18 \text{ Km/h} = \text{_____ m/s}$



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2. $1 \text{ m/s} = \text{_____ km/h}$



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3. Time taken by a car to travel 20 km with 10 km/h is 2 h. (True/False)



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4. Time taken by a train x metres long to cross a pole = Time taken by the train to cover _____ meters.



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5. A person travels a distance of 20 km at a speed of 10 km/h. How much distance can he travel for the same time period, if he travels at 20 km/h?



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6. What is the average speed of the car if it travels a distance of d km in t h ?



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7. A car covers a certain distance in 2 h at 10 km/h. in what time can it cover the same distance, if it travels at 20 km/h?



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8. If a car travels a distance of 20 km in 2 h and another 10 km in 3 h, then the average speed of the car is _____.



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9. A train 250 m long is running at a uniform speed of 25 m/s, then the time taken by it to cross an electric pole is _____.



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10. A train 300m long is running at a uniform speed of 20 m/s, then the time taken by it to cross a platform of length 60m is _____.

A. 16s

B. 18s

C. 15s

D. 17s

Answer: B



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11. The time taken for two trains of lengths, a metres and b metres, running at x km/h and y km/h in the opposite directions to cross each other = Time taken to cover $(a + b)$ metres at _____ km/h.



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12. Two bodies move away from each other with speeds of 10 km/h and 5 km/h. Then their relative speed is _____.



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13. The time taken by a train l metres long running at x km/h to pass a man who is running at y km/h in the direction opposite to

that of the train = The time taken to cover l metres at _____ km/h.



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14. The time taken by the faster train of length a metres running at x km/h to pass the slower train of length b metres running at y km/h in the same direction = The time taken to cover $(a + b)$ metres in _____ km/h.



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15. A train 120 m long is running with a speed of 64 km/h . What time is taken for it to pass a man who is running at 4 km/h in the same direction in which the train is moving ?



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16. If the speed of a boat downstream is x km/h and the speed upstream is y km/h then its speed in still water is _____ km/h



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17. The speed of a boat in still water is 9 km/h and the speed of the stream is 6 km/h , then the speed of the boat downstream is _____ km/h



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18. If the speed of a boat in still water is $u \text{ km/h}$ and the speed of the stream is $v \text{ km/h}$, then the speed of the boat upstream is _____ km/h





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19. The speed of a boat downstream is 9 km/h and the speed upstream is 5 km/h , then its speed in still water is _____ km/h



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20. The speed of a boat downstream is 9 km/h and the speed upstream is 5 km/h , then its speed in still water is _____ km/h



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21. A person covers a distance of 300 km in 6 h by travelling at a constant speed. If he travels at the same speed, then find the distance he can travel in 8 h



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22. How long does a train 300 m long travelling at a speed of 54km/h take to cross a pole ?



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23. What time does a train 200 m long take to cross a bridge 800 m long if the train is travelling at a speed of 72 km/h ?



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24. An employee, travelling at 20 km/h reaches his office half - an - hour late than the time he would take while travelling at 25 km/h . Find the distance between his house and the office



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25. A thief is travelling at a speed of 90 km/h in a car, whereas a policeman is chasing him in a jeep at the rate of 96 km/h . If the distance between them is 5 km at present, then what time will the police take to catch the thief ?



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26. If a person travels 60 km at a speed of 30 km/h and the next 120 km at a speed of 40 km/h then find the average speed of the person for the total journey .



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27. A bus travelling at 45 km/h takes 3 h more than that of another bus travelling at 60 km/h to cover the same distance. Then find the distance covered by each but in this journey .





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28. Two stations A and B are 500 km away. If two buses each start from station A and B simultaneously travelling towards the other station with speeds 80 km/h and 90 km/h , respectively, find the distance between the two buses exactly after 2 h.



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29. Find the ratio of the times taken for a train 300 m long and travelling at a speed of 63 km/h to cross a person travelling at a speed of 9 km/h in the opposite direction and to cross a bridge 400 m long.



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30. If a train travelling at 54 kmph crosses a boy standing on a platform in 12 s and the

platform in 26 s, then what is the length of the platform ?



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Test Your Concepts Short Answer Type Questions

1. A school boy, travelling at 3 km/h reaches his school 32 min late, but if he travels at 5 km/h then he reaches his school 28 min early. Find the distance then he travels every day to reach the school ?



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2. A person leaves Hyderabad at 7 : 00 a.m. and reaches Chennai, which is at a distance of 360 km at 1:00 p.m. After taking half -an - hour rest, he again leaves Chennai and reaches Hyderabad at 9:00 p.m. Find the decrease in his speed while coming back to Hyderabad, if he maintains uniform speed .



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3. If a train, A, 250 m long , travelling at a speed of 20 m/s takes 30 s to overtake another train B travelling at a speed of 18 km/h in the same direction. then find the length of the train B.



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4. A person travels one - third of the total distance at a speed of 2 km/h, the next one third of the total distance at a speed of 3 km/h

and the rest of the total distance at a speed of 6 km/h . Find the average speed of the person for the total trip?



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5. If the speed of a boat in still water is 7.5 km/h and the speed of the stream is 2.5 km/h , then find the total time required for the boat to travel 30 km upstream and 30 km downstream .



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6. If a boat takes 4 h longer to travel a distance of 45 km upstream than to travel the same distance downstream, then find the speed of the boat in still water if the speed of the stream is 2 km/h



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7. In a 1000 m race, A beats B by 100 m and B beats C by 100 m. By how much distance can A beat C in the race ?



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8. In a race of 600 m, Anand beats Bharat by either 45 m or 9 s. Find the time taken by Anand and Bharat to finish the race



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9. The speed of a boat in still water is 15 km/h and the speed of the stream is 5 km/h if a person travels 36 km upstream and then

returns to the starting point then find the average speed of the total journey



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10. In a race of 50 m, A wins over B by 10 m and A wins over C by 14 m. In the same race by how many metres does B win over C ?



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11. X can run 650 m in 55 s and Y can run the same distance in 1 min 5 .By what distance can X beat y in the 650 m race ?



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12. In a 1000 m race, Swaroop beats Laxman by either 100 m or 20 s and Laxman beats Sashidhar by 25 s. By what distance can Swaroop beat Sashidhar in the same race ?



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13. For a boat to reach port B from port A, it has to travel 80 km upstream and then 240 km downstream. If the speed of the boat in still water is 45 km/h and the speed of the stream is 5 km/h ,then what is the time taken by the boat to reach port B from port A ?



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14. A boat can travel at a speed of 6 km/h upstream and 15 km/h downstream. If it

distance of 30 km upstream and 60 km downstream, then the average speed for the entire journey is _____



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15. The distance between two stations X and Y is 100 km. Sujay starts on a bike at 6 a.m. from X and reaches Y at 11 a.m. Anil starts at 8 a.m. from Y and reaches X at 12 noon. Find at what time they will meet .



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Test Your Concepts Essay Type Questions

1. If a person travels in a car at a speed of 30 km/h then he would reach his destination on time . He covers half journey in $\frac{4}{5}$ th time. What should be his speed for the remaining part of the journey so that he reaches his destination on time ?



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2. If Ramu travelled 25% slower than his usual speed, then he would reach his destination 2 h late. Find the usual time taken by him to reach his destination (in hours)



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3. Two trains of lengths 200 m and 150 m run on parallel tracks. When they run in the same direction, it will take 70 s to cross each other and when they run in opposite direction, they

take 10 s to cross each other . Find the speed of the faster train



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4. If Somu walked to his office at 6 kmph, he would have reached his office 4 min early. If he walked at 4 kmph, he would have reached the office 6 min late. Find the distance he has to travel to reach his office (in km)



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5. The speed of a boat in still water is 8 kmph and the speed of stream is 6 kmph . The boat covers a round - trip Journey in 12 h. Find the time taken by it to complete the upstream journey



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Concept Application Level 1

1. A is twice as fast as B and B is thrice as fast as C. In how many minutes will B cover the

distance, which was covered by C in 57 min ?

A. 18

B. 27

C. 38

D. 19

Answer: D



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2. Which of the following is the least ?

A. 25 m/s

B. 1560 m/min

C. 86.4 km/h

D. 1.5 km/h

Answer: C



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3. A train crosses a telegraph pole in 15 s. The time taken by the train to cross a bridge whose length is twice its length is _____

A. 15 s

B. 30 s

C. 40 s

D. 45 s

Answer: D



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4. The time taken by a 240 m long train, travelling at a speed of 72 km/h to cross a pole is _____

A. 15 s

B. 12 s

C. 25 s

D. 27 s

Answer: B



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5. Salil walks a certain distance at 2.5 km/h for 2 h and then runs 10 km at a certain speed for

3 h. Salil's average speed for the whole journey is _____

A. 2 km/h

B. 3km/h

C. 5km/h

D. 6km/h

Answer: B



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6. How long does a train, 200 m long , travelling at a speed of 81 km/h takes to cross a stationary train 250 m long ?

A. 40 s

B. 30 s

C. 20 s

D. 10 s

Answer: C



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7. A train 150 m long completely passes a boy walking in the opposite direction at 6 kmph in 9 s and a car travelling in the opposite direction in 6 s. Find the speed of the car .

A. 18 kmph

B. 36 kmph

C. 48 kmph

D. 60 kmph

Answer: B



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8. A train 100 m long completely passes a man walking in the same direction at 6 kmph in 5 s and a car travelling in the same direction in 6s.

Find the speed of the car

A. 30 kmph

B. 24 kmph

C. 48 kmph

D. 18 kmph

Answer: D



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9. If a 300 m long train is travelling at a constant speed, then find the ratio of the time it takes to cross a pole and a 500 m long bridge

A. 3:8

B. 3:5

C. 5:6

D. 5: 12

Answer: A



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10. A car travels x km at 60 kmph and then travels another $2x$ km at 40 kmph. Find its average speed for the entire distance

A. 45 kmph

B. 48 kmph

C. 50 kmph

D. 56 kmph

Answer: A



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11. If the time taken by a train, 170 m long, travelling at a certain speed to cross a stationary train, 180 m long is 15 s, then what is the speed of the train ?

A. $12\frac{1}{3}m / s$

B. $25\frac{1}{3}m / s$

C. $23\frac{1}{3}m / s$

D. $27\frac{1}{3}m / s$

Answer: C



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12. If a man runs at 9 m/s , then what distance can he cover in $2\text{ h } 30\text{ min}$?

A. 18 km

B. 27 km

C. 81 km

D. 96 km

Answer: C



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13. A policeman, travelling at 75 km/h chases a thief 1500 m away from him and travelling at

60 km/h. What is the time taken by the policeman to catch the thief ?

A. 6 min

B. 16 min

C. 12 min

D. 8 min

Answer: A



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14. The ratio of the speeds of Amar and Akbar is $8 : 5$. If Akbar takes 15 min more than Amar to cover a certain distance , then find the time taken by Akbar to cover the same distance

A. 25 min

B. 15 min

C. 20 min

D. 40 min

Answer: D



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15. A cat sights a rat at a distance of 200 m away from it and starts running towards it at 20 m/s. At this moment, the rat notices the cat and moves away from it at a speed of 15 m/s . After what time will the cat be able to catch the rat ?

A. 20 s

B. 40 s

C. 60 s

D. 80 s

Answer: B



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16. A train travels for 12 h, the first half of the distance at 80 kmph and other half of the distance at 40 kmph. Find the total distance travelled

A. 600 km

B. 624 km

C. 640 km

D. 675 km

Answer: C



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17. Two persons A and B move towards each other from P and Q , respectively. They meet 50 kms away from Q. If the ratio of the speeds of

A and B is $4 : 1$, then find the distance between P and Q

A. 200 km

B. 175 km

C. 125 km

D. 250 km

Answer: D



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18. Two trains 150 m long and 250 m long are traveling at the speeds of 30 kmph and 33 kmph , respectively, on parallel tracks in opposite directions. What is the time taken by these trains to cross each other completely from the moment they meet ?

A. $22\frac{6}{7}s$

B. $21\frac{3}{7}s$

C. $22\frac{1}{7}s$

D. $21\frac{5}{7}s$

Answer: A



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19. A person takes 1 h more than that of his friend to reach a party. The distance travelled by the person is 20 km more than that of his friend. Also given that the speed of the persons is 16 km/h , whereas that of his friend is 15 km/h , find the distance travelled by his friend to reach the party

A. 60 km

B. 50 km

C. 80 km

D. 30 km

Answer: A



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20. Travelling at $\frac{4}{5}$ the of his usual speed, a man is 15 min late. What is his usual time to cover the same distance ?

A. 1 h

B. 75 min

C. 15 min

D. 45 min

Answer: A



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21. The average of the speed of the boat upstream and the speed of the boat downstream is equal to the _____

A. speed of the boat in still water

B. speed of the stream

C. speed of the boat upstream

D. speed of the boat downstream

Answer: A



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22. A man can swim downstream at 10 km/h and upstream at 4 km/h .Find the speed of the

man in still water and the speed of the current
, respectively.

A. 7 kmph, 2 kmph

B. 7.5 kmph, 2.5 kmph

C. 7 kmph, 3 kmph

D. 8 kmph, 2 kmph

Answer: C



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23. The speed of a boat upstream is 12 km/h . If it can travel a distance of 42 km downstream in 3 h , then the speed of the current is

A. 2 km/h

B. 1.5 km/h

C. 0.5 km/h

D. 1 km/h

Answer: D



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24. A car covers 300 km at a constant speed. If its speed was 10 kmph more, it would have taken 1 h less to travel the same distance. Find the speed of the car

A. 60 kmph

B. 50 kmph

C. 40 kmph

D. 75 kmph

Answer: B



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25. The sum of the times taken by train P and train Q to cross their own lengths is twice the time taken by them to cross each other when they are travelling in opposite direction to each other . If P takes 20 s to cross a stationary pole, then find the time taken by Q to do the same .(in seconds)

A. 25

B. 30

C. 20

D. 15

Answer: C



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26. A man can row 20 kmph in still water. It takes him thrice as long to row up as to row down the river. Find the speed of the stream .

A. 8 kmph

B. 10 kmph

C. 12 kmph

D. 15 kmph

Answer: B



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27. A person saves 5 min in covering a certain distance by increasing his speed by 20% .
What is the time taken to cover the distance at his usual speed ?

A. 25 min

B. 30 min

C. 45 min

D. 50 min

Answer: B



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28. A train leaves Hyderabad at 5 a.m. and reaches Bangalore at 3 p.m. and reaches

Hyderabad at 5 p.m. When do the two trains meet?

A. 10 a.m.

B. 11 a.m.

C. 12 noon

D. 1 p.m.

Answer: B



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29. In a 100 m race, A beats B by 30 m, and in the same race B beats C by m. By what distance does A beat C ?

The following steps are involved in solving the above problem. Arrange them in sequential order.

(A) The ratio of distances covered by A and B = 100 : 70 and the ratio of distances covered by B and C = 100 : 80

(B) When A is at 100 m from the starting point, C will be at 56 m from the starting point

(C) A beats C by $100 - 56$, i.e., 44 m

(D) The ratio of distances covered by A and

$$C = \frac{100}{70} \times \frac{100}{80} = \frac{100}{56}$$

A. BDAC

B. ABCD

C. DABC

D. ADBC

Answer: D



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30. The speed of a boat downstream is 12 km/h and the speed of the boat upstream is 6 km/h .

Find the speed fo the stream

The following steps are involved in solving the above problem. Arrange them in sequential order

(A) the speed of the boat downstream = $(x + y)$

km/h = 12 km/h

The speed of the boat upstream = $(x - y)$ km/h =

6 km/h

(B) Let the speed of the boat in still water be x

km/h. Let the speed of the stream by y km/h

$$x + y = 12 \quad (1)$$

$$x - y = 6 \quad (2)$$

On solving Eqs (1) and (2) , we get $x = 9$ km /h
and $y = 3$ km/h

(D) The speed of the stream = 3 km/h

A. ABCD

B. BADC

C. BACD

D. BCAD

Answer: C



Concept Application Level 2

1. A boat can travel x km upstream and 25 km downstream in the same time. Find how many times the speed of the boat in still water is to the speed of the stream .

The following steps are involved in solving the above problem . Arrange them in sequential order.

(A) Let the speed of the boat in still water be x

kmph and speed of the stream by y kmph

$$(B) \frac{25}{x + y} = \frac{15}{x - y}$$

(C) Speed of the boat downstream = $(x + y)$

kmph and the speed of the boat upstream = $(x$

- $y)$ kmph

(D) Speed of the boat in still water is 4 times

the speed of the stream.

$$(E) x = 4y$$

A. ACBDE

B. ACEDB

C. ACBED

D. ABCDE

Answer: C



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2. A train takes 10 s to cross a bridge of length 100 m travelling at 90 kmph. Find the length of the train (in m)

A. 120

B. 130

C. 140

D. 150

Answer: D



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3. A person saves 180 min in covering a certain distance, when he increases his speed from 25 kmph to 30 kmph . Find the distance

A. 250 km

B. 420 km

C. 500 km

D. 450 km

Answer: D



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4. Two trains are travelling in opposite directions with speeds 25 km/h and 30 m/s , respectively. If the length of one train is 300 m and that of the other train is 250 m , then find

the time taken by the trains to cross each other.

A. 8 s

B. 10 s

C. 10 s

D. 14 s

Answer: B



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5. Shiva walks at 3 km/h from his house and reaches his office 17 min late. If he walks at 5 km/h, then he is early to the office by 15 min. Find the distance between his office and house.

A. 3 km

B. 5 km

C. 4 km

D. 2 km

Answer: C



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6. In a 900 m race, Sreenivas beats Vishnu by 270 m and Venkat by 340 m. BY how many metres does Vishnu beat Venkat in the same race ?

A. 70

B. 200

C. 100

D. 140

Answer: C



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7. Ashok ran around a square plot ABCD once in the following manner. He ran the distance AB and BC at 4 kmph and 6 kmph respectively. He ran the distance CD and DA at 4 kmph and 6 kmph, respectively. His average speed for running from A to C was 4.8 kmph. Find his average speeds for running around the square plot once (in kmph)

A. 3.6

B. 4

C. 4.8

D. 5.4

Answer: C



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8. A person can swim at the rate of 5 kmph upstream and 13 kmph downstream. Find the

time taken by the person to swim 10 m in still water.

A. 10 s

B. 8 s

C. 6 s

D. 4 s

Answer: D



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9. In a $100m$ race, A beats B by $20m$ or 5 second the speed of A

A. $2m/s$

B. $4m/s$

C. $5 m/s$

D. $8 m/s$

Answer: C



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10. Ravi travels at the speed of 20 kmph and after 5 h, Pradeep starts from the same point and travels in the direction as Ravi at 25 kmph. What distance does Pradeep travel before he catches up with Ravi ?

A. 200 km

B. 300 km

C. 500 km

D. 150 km

Answer: C





11. How long will a train of length 250 m running at a speed of 108 kmph take to cross another train of length 350 m running in the same direction at speed of 18 kmph ?

A. 15 s

B. 21 s

C. 24 s

D. 18 s

Answer: C



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12. Ravi is $1\frac{1}{3}$ times as fast as Pradeep. If Pradeep has a head start of 50 m then what should be the length of the racecourse such that both of them reach the finishing point at the same time ?

A. 250 m

B. 100 m

C. 150 m

D. 200 m

Answer: D



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13. The time taken by a man to row downstream is $\frac{3}{5}$ the of the time taken by him to row upstream. If the product of the speeds of the man and the current is (both taken in

kmph) 36, then find the speed of the man and the current .

A. 12 kmph, 3 kmph

B. 10 kmph, 2 kmph

C. 9 kmph, 2 kmph

D. 10 kmph, 3 kmph

Answer: A



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14. A train x takes 50 s to cross a 400 m long train moving at a speed of 200 m/s. It would takes 100 s to cross a pole. Find the speed of the train X (in m/s)

A. 10

B. 12

C. 20

D. 24

Answer: B



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15. A person covers 20 km in a certain time. He travels four successive distances of 5 km each at respective speeds of 10 kmph, 20 kmph , 30 kmph, and 60 kmph. Find the time taken to cover the total distance

A. 2 h

B. 1 h 30 min

C. 1 h

D. 30 min

Answer: C



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16. A train of length 360 metres is running at a speed of 72 km/h. In how long time will cross pole ?

A. 12

B. 18

C. 20

D. 16

Answer: B



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17. A train T travelling at a speed of 54 kmph passes an electric pole in 20 s. Find the time taken by it to cross a bridge of length 900 m in seconds)

A. 60

B. 50

C. 40

D. 80

Answer: D



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18. In a 1500 m race, P beats Q by 100 m and P beats R by 240 m. By what distance does Q beat R in the same race ?

A. 200 m

B. 160 m

C. 140 m

D. 150 m

Answer: D



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19. Find the time taken by a train of length 100 m running at a speed of 72 kmph to cross another train of length 200 m running at a speed of 63 kmph in the same direction

A. 60 s

B. 30 s

C. 120 s

D. 90 s

Answer: C



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20. A train took 20 s to cross a stationary pole when travelling at 72 kmph. In how many seconds can it cross a 500 m long bridge ?

A. 40

B. 45

C. 50

D. 55

Answer: B



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21. In a 1000 m race, A beats B by 100 m , and in the same race, A beats C by 190 m. Find by what distance does B beat C in the same race ?

A. 110 m

B. 90 m

C. 100 m

D. 120 m

Answer: C



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22. A train of length 300 m takes 20 s to overtake a cyclist travelling at 1 kmph . Find its speed (in m/sec)

A. 20

B. 25

C. 15

D. 12.5

Answer: A



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23. A train travelling at 36 kmph crosses a boy standing on a platform in 15 s and the

platform in 28 s. Find the length of the platform (in m).

A. 120

B. 130

C. 140

D. 150

Answer: B



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24. A man misses a train by 1 h if he travels at a speed of 4 km/h . If he increases his speed to 5 km/h, he still misses the train by 24 min . At what speed should he travel so that he reaches the station exactly on time ?

A. 12 kmph

B. 8 kmph

C. 6 kmph

D. 10 kmph

Answer: C



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25. Ramesh and Satish started from two towns P and Q and travelled towards each other simultaneously/ They met after 2 h. After the meeting, Ramesh took 3 h less to reach Q than what Satish took to reach P. Find the ratio of the speeds of Ramesh and Satish

A. 3 : 1

B. 2 : 1

C. 3 : 2

D. 4: 3

Answer: B



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26. A train P takes 40 s to cross 800 m long and having a speed of 30m/s , in the opposite direction. It takes 120 s to cross another train twice its length and having the same speed and moving in the opposite direction to it . Find the length of the train P in metres.

A. 600

B. 800

C. 1000

D. 1200

Answer: B



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27. Subodh and Hari run a race. Subodh gives Hari a start of 10 m and is beaten by almost 10 m. Who has a higher speed between the two ?

A. Subodh

B. Hari

C. Both have equal speeds

D. Cannot be determined

Answer: D



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28. The speed of a boat in still water is 9 kmph and the speed of stream is 6 kmh. If the boat covers a round trip journey in 6 h, then find

the time taken by the boat to complete the downstream journey ?

A. $2\frac{1}{4}h$

B. $1h$

C. $1\frac{3}{4}h$

D. $1\frac{1}{2}h$

Answer: B



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29. The speed of a boat in still water is 8 kmph and the speed of stream is 6 kmph . The boat covers a round - trip journey in 12 h. Find the time taken by it to complete the upstream journey ?

A. $10\frac{1}{2}h$

B. $9\frac{3}{4}h$

C. $10\frac{1}{4}h$

D. $9\frac{1}{4}h$

Answer: A



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30. Two trains of equal lengths take a minute to cross each other when traveling in the same direction. They take 20 seconds to cross each other when traveling in opposite directions. Find the ratio of the speeds of the faster and the slower train.

A. 3 : 2

B. 2 : 1

C. 3 : 1

D. 5: 2

Answer: B



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