

Time and distance – Easy

1. If a car runs at 45km/hr, it reaches its destination late by 10 min but if runs at 60km/hr it is late by 4min. What is the correct time for the journey?

- A. 24min
- B. 14min
- C. 32min
- D. 20min
- E. 46min

2. A truck running from a city at a speed of 40 km/hr and the speed of the truck was increased by 2 km/hr at the end of every hour. Find the total distance covered by the truck in the first 5 hours of the journey.

- A. 180 km
- B. 120 km
- C. 220 km
- D. 90 km
- E. 105 km

3. Two persons start running simultaneously around a rectangular track of length 700 m from the same point at speeds of 45 km/hr and 25 km/hr. When will they meet for the first time any where on the track if they are moving in opposite directions?

- A. 50 sec.
- B. 42 sec.
- C. 25 sec.
- D. 36 sec.
- E. 40 sec.

4. I walk a certain distance and ride back taking a total time of 37 minutes. I could walk both ways in 55 minutes. How long would it take me to ride both ways?

- A. 5 min.
- B. 10 min.
- C. 13 min.
- D. 19 min.
- E. None of these

5. A motor-cycle covers 40 km with a speed of 20 km/hr. find the speed of the motor-cycle for the next 40 km journey so that the average speed of the whole journey will be 30 km/hr.

- A. 70 km/hr
- B. 52.5 km/hr
- C. 60 km/hr
- D. 60.5 km/hr
- E. None of these.

6. A frog tries to come out of a well whose inner sides are slippery. Due to the slippery walls the frog slips 20 m down in every attempt of 40 m going up. If the depth of the well is 200m then in how many attempts the frog will come out of the well?

- A. 10
- B. 9
- C. 11
- D. 12
- E. 8

7. A car starts running at the speed of 56 km per hour. If the speed of the car increase 6 km at the end of every hour then what will be distance covered at the end of ten hours from the start of the journey?

- A. 790 km
- B. 830 km
- C. 835 km
- D. Can't be determined
- E. None of these

8. A boy travelled from the home to the college at the rate of 25 kmph and walked back at the rate of 4 kmph. If the whole journey took 5 hours 48 minutes, Find the distance of the college from the home.

- A. 5 km
- B. 10 km
- C. 15 km
- D. 20 km
- E. None of these

9. Raj and Prem walk in opposite direction at the rate of 3 km and 2 km per hour respectively. How far will they be from each other after 2 hrs?

- A. 6 kmph

- B. 8 kmph
- C. 10 kmph
- D. 12 kmph
- E. None of these

10. The distance between point A and point B is 400 km. A person starts from point A with a speed of x km. and at the same time another person starts from B with a speed of $x+10$ km. After 2 hours they meet each other. Find the ratio between their speeds.

- A. 19 : 20
- B. 21 : 18
- C. 15 : 19
- D. 23 : 22
- E. 19 : 21

11. If Rachit drives a car four times a lap @10, 20, 30, 60 kmph. What is his average speed?

- A. 24 km/hr
- B. 36 km/hr
- C. 48 km/hr
- D. 30 km/hr
- E. 20 km/hr

EXAMS DAILY

12. Waking $\frac{3}{4}$ of his normal speed, Ravi was 18 minutes late in reaching his office. The usual time took to cover the distance between his home and office was:

- A. 36 minutes
- B. 24 minutes
- C. 42 minutes
- D. 54 minutes
- E. None of these

13. Ajay walked at 10 kmph for certain part of the journey and then he took an auto for the remaining part of the journey travelling at 30 kmph. If he took 10 hours for the entire journey, what part of journey did he traveled by auto if the average speed of the entire journey be 18 kmph?

- A. 132 km
- B. 145 km
- C. 128 km
- D. 120 km
- E. None of these

14. Two places A and B are at a certain distance. Ramu started from A towards B at a speed of 40 kmph. After 2 hours Raju started from B towards A at a speed of 60 kmph. If they meet at a place C then ratio of ratio of time taken by Raju to Ramu to reach Place C is 2:3. Then what is the distance between A and B?

- A. 300 Km
- B. 400 Km
- C. 480 Km
- D. 600 Km
- E. Cannot be determined

15. A man traveled 100 km by Bike in 2 hours. He then traveled in Bus for 8 hrs and then Train in 9 hrs. Ratio of Speeds of Bus to Train is 4:5. If speed of train is $\frac{4}{5}$ of Bike speed then the entire journey covered by him in Km is?

- A. 516 Km
- B. 616 Km
- C. 716 Km
- D. 816 Km
- E. None

16. The distance between Shaurya's house and Pratyusha's house is 18 km. Shaurya's speed is $\frac{3}{7}$ th of that Pratyusha. Shaurya takes one hour in going to Pratyusha's house. What is the speed of Pratyusha ?

- A. 18 kmph
- B. 24 kmph
- C. 30 kmph
- D. 32 kmph
- E. 42 kmph

17. 17. While covering a distance of 24 km, a man noticed that after walking for 1 hour and 40 minutes, the distance left to cover by him was 5 times of the covered distance. What was his speed in meters per second?

- A. $\frac{2}{3}$
- B. $\frac{1}{3}$
- C. $\frac{4}{5}$
- D. $\frac{5}{4}$
- E. None of these

18. The taxi charges in a city consist of fixed charges and additional charges per kilometer. The fixed charges are for a distance of up to 5 km and additional

charges are applicable per kilometer thereafter. The charge for a distance of 10 km is Rs. 350 and for 25 km is Rs. 800. The charge for a distance of 30 km is-

- A. Rs. 800
- B. Rs. 750
- C. Rs. 900
- D. Rs. 950
- E. None of these

19. A Volvo tourist bus with only the driver inside has a speed of 80 kmph. Its maximum speed reduces by a quantity which is directly proportional to the number of passengers (excluding the driver) seated inside. The maximum speed of the bus reduces by 20 kmph, if there are 5 passengers. A maximum of how many passengers should be seated so that the bus can move?

- A. 20
- B. 19
- C. 25
- D. 17
- E. None of these

20. A boy goes to school at a speed of 5 km/h and returns to the village at a speed of 4 km/h. If he takes 4 hours and 30 minutes in all, what is the distance between the village and the school?

- A. 7 km
- B. 10 km
- C. 5 km
- D. 4 m
- E. None of these

21. A person travelled 132 km by auto, 852 km by train and 248 km by bike. It took 21 hours in all. If the speed of train is 6 times the speed of auto and 1.5 times speed of bike, what is the speed of train?

- A. 78 km/h
- B. 104 km/h
- C. 96 km/h
- D. 88 km/h
- E. None of these

22. A car drove from Agra to Delhi without stopping. It covered the first 50 miles of its journey at an average speed of 25 mph. What was the car's average speed (in mph), for the remaining 130 miles if its overall average speed was 45 mph?

- A. 28 mph
- B. 40 mph
- C. 50 mph
- D. 65 mph
- E. None of these

23. A motor car does a journey in 16 hours, covering the first half at 30 Km/hr and the second half at 50 Km/hr. What is the distance covered?

- A. 480 km
- B. 540 km
- C. 500 km
- D. 400 km
- E. 600 km

24. A person covers a certain distance through car. Had he moved 8km faster, he can reach the place 25 minutes earlier. If he had moved the 4 km slower, he will reach the same place 25 minutes later. What is the speed of car?

- A. 20kmph
- B. 12kmph
- C. 16kmph
- D. 24kmph
- E. None of these

25. A truck covers distance of 294km at a certain speed in 7hrs. How much time does car takes? If the car travelled 14km/hr more than that of the speed of the truck to cover a distance and also the car travelled 16km more than that of truck?

- A. 5 hr 45 min
- B. 4hr 12 min
- C. 5hr 32 min
- D. 6hrs
- E. None of these

26. Two cars A and B, started simultaneously from the same point in opposite directions, car A towards west and car B moves towards East. If speed of car B is 45kmph and after 35 minutes they were 65.5 km apart, what is the speed of car A?(in Kmph)

- A. 65.65kmph

- B. 67.28kmph
- C. 75kmph
- D. 71.23kmph
- E. None of these

27. A car travels 70 km/h for one and half hours. Then it travels for 3 hours at 50 km/h. After that it covers 105 km in one and half hours. What is the average speed of the car for the whole journey?

- A. 50 km/h
- B. 45 km/h
- C. 40 km/h
- D. 60 km/h
- E. None of these

28. A car travels the first one-third of a certain distance with a speed of 20 km/hr, the next one-third distance with a speed of 30 km/hr and the last one-third distance with a speed of 60 km/hr. The average speed of the car for the whole journey is

- A. 20
- B. 40
- C. 30
- D. 25
- E. None of these

EXAMS DAILY

29. Sumit covers a distance in 30 minutes if he drives at a speed of 50 km/h on an average. Find the speed at which he must drive at to increase the time of the journey by 25%?

- A. 50 km/h
- B. 35 km/h
- C. 40 km/h
- D. 20 km/h
- E. None of these

30. If a person divides a distance into 3 equal parts and travels the three parts with speeds of 50, 40 and 30 km/hr respectively, what is his average speed (in km/hr) for the whole journey?

- A. 37.5 km/hr
- B. 60 km/hr
- C. 38.3 km/hr
- D. 40 km/hr
- E. None of these

31. A person covers 480km in 8 hrs. He covers some distance by car at the average speed of 40 km/hr and the remaining distance by train at the average speed of 70 km/hr. Find the distance covered by the car?

- A. 200 km
- B. 250km
- C. 170km
- D. 160km
- E. None of these

32. A person travels from A to B at the speed of 50 km/hr and returns by increasing his speed by 40%. What is the average speed of both the trips?

- A. $58\frac{1}{3}$ hr
- B. 50 hr
- C. $55\frac{2}{3}$ hr
- D. 52 hr
- E. None of these

33. Moni left for Bangalore from Chennai at 9.30 am. She travelled at the speed of 60 km/hr for 2 hrs 15 mins. After she reduced the speed to 40 km/hr. If the distance between the 2 cities is 285 km, at what time did moni reach Bangalore?

- A. 2.30 pm
- B. 3.30 pm
- C. 4 pm
- D. 2 pm
- E. None of these

34. Ragu drove at the speed of 60 km/hr from home to a resort. Returning over the same route, he got stuck in traffic and took an hour longer, also he could drive only at the speed of 50 km/hr. How many kilometers did he drive each way?

- A. 300 km
- B. 450 km
- C. 425 km
- D. 325 km
- E. None of these

35. The respective ratio between the speeds of a bus, a car and jeep is 2:3:5. The speed of jeep is 250 percent of the speed of the bus which covers 480 km in 12 hours. What is the average speed of car and jeep together?

- A. 75 km/hr
- B. 80 km/hr
- C. 76 km/hr
- D. 72 km/hr
- E. None of these

36. The ratio between the speed of a train and a car is 18:13 respectively. Also, a bus covered a distance of 480 kms in 12 hours. The speed of the bus is five-ninth the speed of the train. How much distance will the car cover in 5 hours?

- A. 260 km
- B. 270 km
- C. 290 km
- D. 320 km
- E. None of these

37. The average speed of a bus from Koyambedu to Salem is 57 km per hour. The bus is scheduled to leave Koyambedu Bus station at 10 pm and reach Salem at 4.35 am on the next day. The distance between Salem and Koyambedu bus station is 342 km. On the way in between Koyambedu and Salem a halt is scheduled compulsorily. Find out the duration of this halt scheduled?

- A. 35 minutes
- B. 45 minutes
- C. 60 minutes
- D. 48 minutes
- E. Cannot be determined

38. A truck covers a distance of 640 km in 10 hrs. A car covers the same distance in 8 hrs. What is the respective ratio between the speed of the truck and the car?

- A. 3 : 4
- B. 1 : 2
- C. 5 : 6
- D. 6 : 7
- E. 4 : 5

39. Sound is said to travel in air at about 1100 feet per second. A man hears the axe striking the tree, $11/5$ seconds after he sees it strike the tree. How far is the man from the wood chopper?

- A. 2310 feet
- B. 2420 feet
- C. 2550 feet

- D. 2629 feet
- E. None of these

40. A car travels a certain distance taking 7 hrs in forward journey. During the return journey, the speed is increased by 12km/hr and the car takes 5 hrs to reach the destination. What is the distance travelled in one way?

- A. 210 kms
- B. 30 kms
- C. 120 kms
- D. 180 kms
- E. None of these

41. If the total distance of a journey is 120 km. If one goes by 60 kmph and comes back at 40kmph what is the average speed during the journey?

- A. 45 kmph
- B. 50 kmph
- C. 48 kmph
- D. 55 kmph
- E. None of these

42. Vikas can cover a distance in 1hr 24min by covering $\frac{2}{3}$ of the distance at 4 kmph and the rest at 5kmph.the total distance is?

- A. 5 km
- B. 6 km
- C. 4 km
- D. 8 km
- E. None of these

43. A man starts from a place P and reaches the place Q in 7 hours. He travels $\frac{1}{4}$ th of the distance at 10 km/hour and the remaining distance at 12 km/hour. The distance, in kilometer, between P and Q is:

- A. 70 km
- B. 72 km
- C. 80 km
- D. 90 km
- E. None of these

44. In the school, Mohan and Govind took a part in the race and the ratio between their speeds is 5 : 7. Mohan losses the race by 360m then what is the length of the track (in km)?

- A. 1.26 km
- B. 1.2 km
- C. 2 km
- D. 0.9 km
- E. None of these

45. The respective ratio between the speed of a car, a train, and a bus is 5 : 9 : 4. The average speed of the car, the bus and the train is 72 km/hr together. What is the average speed of the car and the train together?

- A. 82 km/h
- B. 72 km/h
- C. 84 km/h
- D. 67 km/h
- E. None of these

46. Ranvir goes to his office from his house at a speed of 16 km/hr and returns to his home from his office at a speed of 20 km/hr and he takes 4 hour 30 minutes in all. If the distance of his friend's house from his office is 20% more than the distance of his house from his office, find the distance of his house to his friend's house. (assuming the office lies between Ranvir's house and his friend's house)

- A. 80 km
- B. 60 km
- C. 92 km
- D. 70 km
- E. 88 km

47. Mohit and Anuj took a part in a race. Mohit runs 300m in 50 second and Anuj takes 1 minute to cover the same distance. By what distance will Mohit beat Anuj in 300 m race?

- A. 25 m
- B. 55 m
- C. 60 m
- D. 50 m
- E. None of these

48. A car covers four successive 7 km distances at speeds of 10 km/hour, 20 km/hour, 30 km/hour and 60 km/hour respectively. Its average speed over this distance is :

- A. 40 km/hr
- B. 20 km/hr

- C. 30 km/hr
- D. 50 km/hr
- E. None of these

49. A person is rock climbing at an altitude of 800 m. He goes up by 7 mph. and come down by 9 mph. what was his average speed?

- A. 7.875 mph
- B. 7.125 mph
- C. 7mph
- D. 7.5 mph
- E. None of these

50. Ram covers a part of the journey at 20 kmph and the balance at 70 kmph taking total of 8 hours to cover the distance of 400 km. How many hours have been driving at 20 kmph?

- A. 2 hours
- B. 3 hours 20 minutes
- C. 4 hours 40 minutes
- D. 3 hours 12 minutes
- E. None of these

EXAMS DAILY

Time and distance – Moderate

1. A car traveled 80% of the distance from town A to B by traveling at T hours at an average speed of V km/h. The car travels at an average speed of S km/h for the remaining part of the trip. Which of the following expressions represents the average speed for the entire trip?

- A. $12VS/(9V+S)$
- B. $5VS/(4S+V)$
- C. $VT/3S$
- D. $9VS/(4S+V)$ km/h
- E. None of these

2. Two places A and B are at a distance of 480Km. Sita started from A towards B at the speed of 40Kmph. After 2 hours Gita started from B towards A at speed of 60 Kmph. They meet at a Place C then what is the difference between the time taken by them to reach their destinations from Place C?
- A. 1 hour
 - B. 2 hours
 - C. 3 hours
 - D. 4 hours
 - E. Cannot be determined
3. The distance between two places A and B is 370 km. the 1st car departs from place A to B, at a speed of 80 kmph at 10 am and 2nd car departs from place B to A at a speed of 50 kmph at 1 pm. At what time both cars meet each other?
- A. 2 : 30 pm
 - B. 2 : 00 pm
 - C. 2 : 10 pm
 - D. 2 : 20 pm
 - E. None of these
4. The distance between Kanpur and Bangalore by flight is 1800 km. An aircraft was slowed down due to bad weather. The time of journey of Bangalore from Kanpur is increased by 30 minutes and the average speed for the journey was reduced by 300 km/h. What is the usual duration of the flight if there is no bad weather?
- A. $3/2$ hours
 - B. $4/5$ hours
 - C. $6/5$ hours
 - D. $2/3$ hours
 - E. None of these
5. P, Q and R start running around a circular field having circumference 88 metre at the same time from the same point. Speeds of P, Q and R are 4 m/minute, 8 m/minute and 11 m/minute. Find after how much time, they will meet again at the same point for the first time.
- A. 88 minutes
 - B. 44 minutes
 - C. 40 minutes
 - D. 60 minutes

E. None of these

6. A driver of a auto rickshaw sees a lorry 60 meters ahead of him. After 30 seconds the lorry is 90 meters behind. If the speed of the auto rickshaw is 38 kmph, then what is the speed of the lorry?

- A. 23 kmph
- B. 25 kmph
- C. 20 kmph
- D. 18 kmph
- E. None of these

7. The distance between two bus stops of lucknow and Delhi is 450 km. A bus starts from lucknow and moves towards delhi at an average speed of 15 km/h. Another bus starts from delhi, 20 minutes earlier than the first bus and moves towards lucknow at an average speed of 20 km/h. How far from lucknow and from delhi will the two buses will meet respectively:

- A. 190 km, 260 km
- B. 290 km, 160 km
- C. 260 km, 190 km
- D. 160 km, 290 km
- E. None of these

8. The average speed of a bus is five times of the average speed of a car. If the difference between the time taken by them to cover a distance of 1260 km is 168 hours then find the time taken by the bus will take to cover the same distance?

- A. 33.6 hours
- B. 42 hours
- C. 56 hours
- D. 21 hours
- E. None of these

9. Raju can travel from his house to school in x hours if he does not stop anywhere. One day, he increases his speed by 4 km per hour but stops for 15 minutes on a tea shop then he reaches 5 minutes earlier. If the distance from his house to the school is 40 km then find the value of x ?

- A. 4
- B. 2
- C. 1
- D. 1.7

E. None of these

10. A man can reach a certain place in 40 hours. If he reduces his speed by $\frac{1}{15}$ th, he goes 5 km less in that time. Find the total distance covered by him.

A. 60 km.

B. 85 km.

C. 75 km.

D. 52 km.

E. None of these

11. Ram and Shyam start at the same time from the same place towards their school. If the speed of Shyam is 83.33% of Ram's speed then he reaches the school 1 hour 15 minutes after Ram. Find the time taken by Ram to reach the school?

A. 6 hours 15 minutes

B. 6 hours 45 minutes

C. 7 hours 30 minutes

D. 5 hours 15 minutes

E. None of these

12. Kannan covers the distance from his home to his office by bike. He travelled at a speed of 15kmph; he reached the office late by 40 minutes. So he increased the speed by 3 kmph, he reached the office late by 30 minutes. Find the distance between the home and his office?

A. 20km

B. 21km

C. 18km

D. 15km

E. None of these

13. Car A leaves the city at 5pm and is driven at a speed of 30km/hr. 3hrs later another car B leaves the city in the same direction as car A. In how much time will car B be 12kms ahead of car A if the speed of car B is 50km/hr?

A. 5hrs

B. 4 hrs 12 mins

C. 8hrs

D. 5 hrs 6 mins

E. 12hrs

14. Two persons start from the opposite ends of a 90 km straight track and run to and from between the two ends. The speed of first person is 30 m/s and the speed of other is $125/6$ m/s. They continue their motion for 10 hours. How many times they pass each other?

- A. 10
- B. 9
- C. 12
- D. 15
- E. None of these

15. Raghav drives his truck very fast at 360 kmph. Moving ahead for some hours he finds some problem in headlights of the truck. So he takes 20 seconds in changing in the bulb of the headlight by stopping the truck. Mean while he notices that 2 truck which was 400 m back is now 200 m ahead of his truck. What is the speed of 2 truck?

- A. 100 kmph
- B. 92 kmph
- C. 108 kmph
- D. 300 kmph
- E. None of these

16. Towns A and B are 225 km apart. Two cars P and Q travel towards each other from towns A and B respectively and meet after 3 hours. If the speed of P be $1/2$ of its original speed and Q be $2/3$ of its original speed, they would have met after 5 hours. Find the speed of the faster car.

- A. 50 km/hr
- B. 40 km/hr
- C. 45 km/hr
- D. 30 km/hr
- E. 60 km/hr

17. If the car increases the speed by 20 kmph, then it will take 3 hours less to cover the distance between A and B and the car decreases the speed by 20 kmph, then it take 4.5 hours more to cover the same distance, then find the distance between the A and B?

- A. 900 km
- B. 1200 km
- C. 1500 km
- D. 1800 km
- E. None of these

18. The speeds of Raj and Ragu are 30 km/hr and 40 km/hr respectively. Initially Ragu is at a place L and Raj is at a place M. The distance between L and M is 650 km. Raj started his journey 3 hours earlier than Ragu to meet each other. If they meet each other at a place P somewhere between L and M, then the distance between P and M is?

- A. 310 km
- B. 330km
- C. 350 km
- D. 325 km
- E. None of these

19. A bike travelled first x km at 10kmph faster than the usual speed but it returned the same distance at 10kmph slower than the usual speed, If the total time taken by the bike is 12 hours and the faster speed is y kmph. Then Find the value of x and y ?

- A. 50km, 25kmph
- B. 25km, 15kmph
- C. 20km, 18kmph
- D. 30km, 20kmph
- E. None of these

20. Shivam travels 20% distance of the total journey by car and 50% of the remaining by train and taxi in the respective ratio of 5:3 and the remaining distance he covers on feet. If the sum of the distance which he travels by car and by Taxi is 126 km, then find the total distance which Shivam travels during his journey?

- A. 360 km
- B. 640 km
- C. 420 km
- D. 400 km
- E. 210 km

21. Amitabh, Dharmendra and Jitendra start from the same place and travel in the same direction at the speed of 20 km/hr, 30 km/hr and 40 km/hr respectively. Dharmendra starts two hours after Amitabh. If Dharmendra and Jitendra overtake Amitabh at the same moment, how many hours after Amitabh did Jitendra start?

- A. 4 hours
- B. 3 hours
- C. 6 hours
- D. 5.5 hours

E. None of these

22. Everyday, Sakshi's husband meets her at New Delhi railway station at 5 pm and drives her to their house. One day, Sakshi reaches the station at 4 pm. She doesn't wait and starts walking towards her house. On the way, she meets her husband coming from their house, and so she gets into the car they drive home. They reach 10 minute earlier than the usual time. For how long did Sakshi walk?

- A. 1 hour
- B. 40 minute
- C. 50 minute
- D. 55 minute
- E. 45 minute

23. Jake is faster than Paul. Jake and Paul each walk 24 km. The sum of their speeds is 7 km/h and the sum of time taken by them is 14 hours. Then Jake's speed is equal to :

- A. 4 km/h
- B. 6 km/h
- C. 5 km/h
- D. 3 km/h
- E. 2 km/h

24. Tim and Elan are 90 km from each other. They start to move each other simultaneously Tim at speed 10 and Elan at speed 5 kmph. If every hour they double their speed what is the distance that Tim will pass until he meets Elan?

- A. 45 km
- B. 60 m
- C. 20 km
- D. 80km
- E. None of these

25. A father and his son start at a point A with speeds of 12 km/h and 18 km/h respectively and reach another point B. If his son starts 60 min after his father at A and reaches B, 60 min before his father, what is the distance between A and B?

- A. 90 km
- B. 72 km
- C. 36 km
- D. 48 km
- E. None of these

26. A man is travelling in his car from city A to B and back. In the journey from A to B he is travelling with constant speed of 40 km/hr. While travelling back his speed was 45 km/hr. He took 3 hrs in the whole journey. What was his average speed?

- A. 36 km/hr
- B. 42.4 km/hr
- C. 10 km/hr
- D. 15 km/hr
- E. 23 km/hr

27. Renu leaving his house at 8 am and he decided filled the petrol in bunk on the way to his office. He travelled at 75% of his regular speed and he reached the petrol bunk in 20 minutes. If he takes 30 minutes to reach the office in regular days, then the distance between house and petrol bunk is what percent of the distance between house and office?

- A. 20%
- B. 40%
- C. 30%
- D. 50%
- E. 60%

EXAMS DAILY

28. Two friends Ram and Ravi are travelling from point A to B, which are 600km apart. Travelling at a certain speed Ram takes 1hr more than Ravi to reach point B. If Ram doubles his speed he will take 1hr 30mins less than ravi to reach point B. At what speed was Ram driving from point A to B?

- A. 150km/hr
- B. 120km/hr
- C. 80km/hr
- D. 45km/hr
- E. 92km/hr

29. Car A starts from Mumbai to Delhi at 8 am and car B starts from Delhi to Mumbai at 8 am. If the ratio of the speed of car A to speed of car B is 2: 1 and the distance between Mumbai to Delhi is 480 km. After meets each other car A takes 240 minutes to reach Delhi and car B takes 16 hours to reach Mumbai. In which time they meet each other?

- A. 2 pm
- B. 4 pm
- C. 6 pm

- D. 8 pm
- E. None of these

30. Deepika rides her bike at an average speed of 30 km/hr and reaches her destination in 6 hours. Heena covers the same distance in 4 hours. If Deepika increases her average speed by 10 km/hr and Heena increases her average speed by 5 km/hr, what would be the difference in their time taken to reach the destination ?

- A. 54 minutes
- B. 1 hours
- C. 40 minutes
- D. 45 minutes
- E. None of these

31. X started from a point A towards point B. After 2 hours Y started from B towards A. By the time X travelled one-fifth of the total distance, Y had also travelled the same. If Y's speed is thrice that of X's speed, find the difference in the times (in hours) taken by X and Y to reach their destinations.

- A. 10
- B. 20
- C. 15
- D. 25
- E. none of these

32. Two boys 'A' and 'B' start at the same time to ride from Delhi to Meerut, 60 km away. A travels 4 km an hour slower than B. B reaches Meerut and at once turns back meeting A 12 km from Meerut. The speed of A was

- A. 4 km/hr
- B. 8 km/hr
- C. 12 km/hr
- D. 16 km/hr
- E. 6 km/hr

33. Buses start from a bus terminal with a speed of 20 km/hr at intervals of 10 minutes. What is the speed of a man coming from the opposite direction towards the bus terminal if he meets the buses at intervals of 8 minutes?

- A. 8 km/hr
- B. 10 km/hr
- C. 7 km/hr
- D. 5 km/hr
- E. 12 km/hr

34. Sandeep after travelling 50 km meets a swami who suggests him to go slower. He then proceeds at $\frac{3}{4}$ of his former speed and arrives at his destination 35 minutes late. Had the meeting occurred 24 km further Sandeep would have reached its destination 25 minutes late. Find the initial speed of Sandeep.

- A. 48 km/hr
- B. 36 km/hr
- C. 54 km/hr
- D. 58 km/hr
- E. 60 km/hr

35. A runs $3\frac{2}{3}$ times as fast as B. If A gives B a start of 80 m. How far must the winning post be from the starting point of A so that A and B reach it at the same time?

- A. 200 m
- B. 110 m
- C. 150 m
- D. 180 m
- E. None of these

36. Sofi started travelling from a place A to B and Priya started travelling from a place B to A which are 576 km apart. They meet after 12 hours. After their meeting, Sofi increased her speed by 2 km/hr and Priya reduced her speed by 2 km/hr, they arrived at B and A respectively at the same time. What is their initial speed?

- A. 21 kmph, 23 kmph
- B. 25 kmph, 27 kmph
- C. 25 kmph, 23 kmph
- D. 24 kmph, 26 kmph
- E. None of these

37. Two Vans start from a place with a speed of 50 kmph at an interval of 12 minutes. What is the speed of a car coming from the opposite direction towards the place if the car meets the vans at an interval of 10 minutes?

- A. 13 kmph
- B. 10 kmph
- C. 14 kmph

- D. 16 kmph
- E. None of these

38. A car travels from a place A to B in 7 hour. It covers half the distance at 30 kmph and the remaining distance at 40 kmph, what is the total distance between A and B?

- A. 120 Km
- B. 250 Km
- C. 240 Km
- D. 150 Km
- E. None of these

39. A truck travelled to a place Q from P, the first 50 km at 10 kmph faster than the usual speed, but it returned the same distance at 10 kmph slower than usual speed. If the total time taken by the truck is 12 hours, then how many hours will travel at the faster speed?

- A. 8 hours
- B. 6 hours
- C. 2 hours
- D. 3 hours
- E. None of these

40. A bus was travelling from Mumbai to Pune was delayed by 16 minutes and made up for the delay on a section of 80 km travelling with a speed 10 km per hour higher than its normal speed. Find the original speed of the bus?

- A.60 km/h
- B.66.66 km/h
- C.50 km/h
- D.40 km/h
- E.None of these

41. Two planes move along a circle of circumference 1.2 km with constant speeds. When they move in different directions, they meet after every 15 seconds and when they move in the same direction, one plane overtakes the other after every 60 seconds. Find the speed of the slower plane.

- A. 0.04 km/second
- B. 0.03 km/second
- C. 0.05 km/second
- D. 0.02 km/second
- E. None of these

42. Robert is travelling on his cycle and has calculated to reach point A at 2 P.M. if he travels at 10 kmph, he will reach there at 12 noon if he travels at 15 kmph. At what speed must he travel to reach A at 1 P.M.?

- A. 8 km/hr
- B. 11 km/hr
- C. 12 km/hr
- D. 14 m/hr
- E. None of these

43. The distance between X and Y is 64 km. Bus A starts from X at a speed of 40km/hr and bus B starts from Y at a speed of 32 km/hr. The both buses travel in the same direction and meet a point Z beyond Y. Then find the distance between Y and Z?

- A. 320 km
- B. 232 km
- C. 360 km
- D. 256 km
- E. None of these

44. In a kilometer race, A beats B by 100 meters. B beats C by 100 meters. By how much meters does A beat C in the same race ?

- A. 200 meters
- B. 180 meters
- C. 190 meters
- D. 210 meters
- E. None of these

45. Without any stoppage a person travels a certain distance at an average speed of 42 km/hr and with stoppages he covers the same distance at an average speed of 28 km/hr. How many minutes per hour does he stop?

- A. 25 minutes
- B. 30 minutes
- C. 20 minutes
- D. 15 minutes
- E. None of these

46. Amit started cycling along the boundaries of a square field from corner point A. After half an hour he reached the corner point C, diagonally opposite to A. If his speed was 8 km/hr, what is the area of the field in square km

- A. 64
- B. 8
- C. 4
- D. 16
- E. None of these

47. A and B walk around a circular track. They start at 8 a.m. from the same point in the opposite directions. A and B walk at a speed of 2 rounds per hour and 3 rounds per hour respectively. How many times shall they cross each other before 9.30 a.m.?

- A. 15
- B. 8
- C. 7
- D. 10
- E. None of these

48. A man completes a certain journey by a car. If he covered 30% of the distance at the speed of 20 km/h, 60% of the distance at 40 km/h and the remaining of the distance at 10 km/h, his average speed is:

- A. 25 km/h
- B. 28 km/h
- C. 30 km/h
- D. 33 km/h
- E. None of these

49. Rahul started his journey on bike at 7.30 pm at a speed of 8 km/h. After 30 min, Lenin started his journey from the same place with the speed of 10 km/h. At what time did Lenin overtake Rahul?

- A. 10 a.m
- B. 9 a.m
- C. 8.30 am
- D. 8 a.m
- E. None of these

50. A man can reach a certain place in 30hrs. If he reduces his speed by $\frac{1}{10}$ th, he goes 9km less in that time. Find his speed ?

- A. 8kmph
- B. 7kmph
- C. 3kmph
- D. 1kmph
- E. None of these

Time and distance – Hard

1. Two buses start at same time from Chennai and Bangalore, which are 250km apart. If the two buses travel towards each other, they meet after 1hr and if they travel in same direction they meet after 5hrs. What is the speed of the bus starts from Chennai if it is know that the one which started from Chennai has more speed than the other one?

- A. 150km/hr
- B. 100km/hr
- C. 45km/hr
- D. 80km/hr
- E. 120km/hr

2. P, Q & R participated in a race. P covers the same distance in 49 steps, as Q covers in 50 steps and R in 51 steps. P takes 10 steps in the same time as Q takes 9 steps and R takes 8 steps. Who is the winner of the race?

- A. P
- B. Q
- C. R
- D. Can't be determined
- E. None of these

3. There are three athletes A, B and C at a same point. A starts running from a point at a speed of 40 m/min. After 5 minutes, B starts running after A with a speed of 50 m/min. Simultaneously, C also starts running after A at 60 m/min. What distance has C covered (in m) when he catches A?

- A. $\frac{500}{3}$
- B. $\frac{1300}{3}$

C. $\frac{700}{3}$

D. 600

E. None of these

4. Salman was travelling on one side of the Yamuna express way with a constant speed of 120 kmph in his car. Govinda was travelling with a constant speed of 80 kmph in the opposite direction. When they crossed each other, Salman decided to take a U-turn and meet him. But before taking a U turn, Salman had to travel for another 3 minutes. How long will it take for Salman to meet Govinda? [Assume time taken by Salman to take U turn is negligible]

A. 29 minutes

B. 28 minutes

C. 30 minutes

D. 33 minutes

E. 18 minutes

5. Two Rabbits started running towards each other, one from A to B and another from B to A. They cross each other after 1.2 hours and the first Rabbit reaches B, 1 hour before the second rabbit reaches A. If the distance between A and B is 60 km, what is the speed of the slower rabbit?

A. 10 kmph

B. 15 kmph

C. 25 kmph

D. 18 kmph

E. 20 kmph

6. speeds of the Shaan and Rohan are 50 km/h and 30 km/h respectively. Initially Shaan is at a place N and Rohan is at a place M. The distance between M and N is 710 km. Shaan started his journey 3 hours earlier than Rohan to meet each other. If they meet each other at a place R somewhere between M and N. then the distance between R and N is

A. 210 km

B. 500 km

C. 430 km

D. 620 km

E. None of these

7. There is a race of 1 km among Hiten, Vikash and Priyank. Hiten and Vikash run 1 km and Hiten wins by 10 seconds. Hiten and Priyank run 1 km and Hiten wins

by 125 meter. When Vikash and Priyank run a km, Vikash wins by 15 seconds. What is the ratio of time taken by Hiten and Vikash to run a km?

- A. 38 : 31
- B. 33 : 35
- C. 35 : 37
- D. 13 : 47
- E. None of these

8. The length of a circular track is 800 m. Virat and Amresh started from the same point on the track and ran in opposite directions. Virat took 12 minutes to cover one kilometer while Amresh took only 9 minutes to cover the same distance. They kept running for 90 minutes. How many times did they cross each other?

- A. 10
- B. 20
- C. 21
- D. 25
- E. None of these

9. A beats B by 15 sec in a 200 m race, B beats C by 25 sec in a 500 m race, C beats D by 32 sec in 800 m race and D beats E by 35 sec in a 1 km race. What must be the speed of A in order to beat E by 800 m in a 2 km race?

- A. 2.5 m/s
- B. 3.33 m/s
- C. 5 m/s
- D. 6.66 m/s
- E. None of these

10. There is a circular track of length 400 mts. If A and B starts at the same point but in opposite direction with a speeds of 8 m/sec and 12 m/s respectively. When will they meet for the first time at the starting point?

- A. 1 min 40 sec
- B. 20 sec
- C. 40 sec
- D. 3 min 20 sec
- E. None of these

11. In a circular race track of length 100 m, three persons A, B and C start together. A and B start in the same direction at speeds of 10 m/s and 8 m/s respectively.

While C runs in the opposite at 15 m/s. When will all the three meet for the first time after the start?

- A. 80 seconds
- B. 100 seconds
- C. 60 seconds
- D. 120 seconds
- E. None of these

12. Two cars start from the same point at the same time towards the same destination which is 420 km away. The first and second car travel at speeds of 60 kmph and 90 kmph respectively. After traveling for some time the speeds of the two cars get interchanged. Finally the second car reaches the destination one hour earlier than the first. Find the time after which the speeds get interchanged?

- A. 5 hours
- B. 3 hours
- C. 4 hours
- D. 6 hours
- E. None of these

13. Car X is Starting from Chennai to Trichy at 8.am and Car Y is started from Chennai to Trichy at 11 a.m. Both the cars are reached at Trichy at the same time. At what time Car Y reached at Trichy from Chennai, if Car X is started at Chennai to Trichy and Car Y is started from Trichy to Chennai at the same time, both the cars will meet at after 2hours?

- A. 1.p.m.
- B. 2.p.m
- C. 3.p.m
- D. 4.p.m
- E. Cannot be determined

14. A man leaves his office to attend the Teacher-Parents' meet in his son's school. The school is distance of 8 km away from his office and he travels at a constant speed. He travelled half the way with the specified speed and stopped at a stationery shop for 10 minutes. To reach the school on time, he had to increase its speed by 2 km/h for the rest of the way. Next time he stopped at stationery shop for 15 minutes. By what value must he increase his speed for the remaining half of the distance to reach the school as per the schedule?

- A. 1.8 kmph
- B. 9.6 kmph
- C. 3.6 kmph

- D. 4.8 kmph
- E. Can't be determined

15. A car covers total 140 km distance, it covers some part of the journey at the speed of 6 km/hr and the rest part of journey at 10 km/hr. If speed of 6 km/hr is replaced by 10 km/hr and speed 10 km/hr is replaced by 6 km/hr, it covers 8 km more distance in the same time. Find time taken by the car to cover 140 km distance and also find average speed of the car.

- A. 8 hr, $5\frac{4}{9}$ km/hr
- B. 15 hr, $30\frac{7}{9}$ km/hr
- C. 18 hr, $7\frac{7}{9}$ km/hr
- D. 10 hr, $10\frac{9}{17}$ km/hr
- E. None of these

16. Distance between Delhi and Jaipur is 300 km. Aman starts from Delhi and Rajiv from Jaipur at same time. After two hours, Aman realized he was travelling slow and therefore increased his speed by 25% and meet Rajiv at a point 108 km from Delhi. Find the increased speed of Aman, if Rajiv derived at a constant speed of 75 km/hr.

- A. 40 km/hr
- B. 50 km/hr
- C. 60 km/hr
- D. 55 km/hr
- E. 65 km/hr

17. A thief sees a jeep at a distance of 250 m, coming towards him at 36 km/h. Thief takes 5 seconds to realize that the police is approaching him by the jeep and started running away from police at 54 km/hr. But police realized after 10 seconds, when the thief starts running away, that he is actually a thief and started chasing at 72 km/hr. What is the total distance covered and total time taken by the police if thief is caught?

- A. 50 s, 1000 m
- B. 65 s, 1150 m
- C. 65 s, 1300 m
- D. 45 s, 1050 m
- E. 60 s, 1200 m

18. Two people A and B start simultaneously from points P and Q towards Q and P respectively. After meeting for the first time, A and B take 8 hours and 18 hours respectively to reach their destination, If A travels at a speed of 96 kmph, find the speed of B.

- A. 32 km/h
- B. 48 km/h
- C. 56 km/h
- D. 64 km/h
- E. None of these

19. Rakesh starts jogging daily. He decided that he will continue this for his entire lifetime. On the 1st day, he jogged for 30 km. Every next day he jogs half the distance that he jogged on the previous day. What is the total distance that Rakesh can possibly jog during his entire lifetime

- A. 42 km
- B. 60 km
- C. 64 km
- D. 58 km
- E. None of these

20. Aravind started for the station half a km from his home walking at 1 km/h to catch the train in time. After 3 minutes he realised that he had forgotten a document at home and returned with increased, but constant speed to get it succeeded in catching the train. Find his latter speed in kmph?

- A. 1.25
- B. 1.1
- C. 11/9
- D. 2
- E. None of these

21. The ratio between the rate of speed of travelling of A and B is 2:3 and therefore A takes 20 minutes more than time taken by B to reach a particular destination. If A had walked at double the speed, how long would he have taken to cover the distance?

- A. 60 minutes
- B. 35 minutes
- C. 20 minutes
- D. 30 minutes
- E. None of these

22. A man travels 35 km partly at 4 km/hr and at 5 km/hr. If he covers former distance at 5 km/hr and later distance at 4 km/hr, he could cover 2 km more in the same time. The time taken to cover the whole distance at original rate is
- A. 8hrs
 - B. 6hrs
 - C. 4hrs
 - D. 5hrs
 - E. None
23. A man travels 400 km in , partly by rail and partly by steamer. He spends 9 hours more time on steamer. If the velocity of the steamer is 30 km/hr and velocity of the rail is 70 km/hr, how much distance does he cover by steamer?
- A. 309 km
 - B. 371 km
 - C. 464 km
 - D. 556 km
 - E. None of these
24. Two persons C and D started travelling from A and B which are 300 km apart, towards B and A respectively at 1:00 pm. C travels at a constant speed of 30 km/hr whereas D doubles his speed every hour. If D reaches A in $3\frac{7}{8}$ hours at which time did C and D meet each other?
- A. 4:30 pm
 - B. 4:40 pm
 - C. 5:00 pm
 - D. 5:10 pm
 - E. None of these
25. It takes eight hours for a 600 km journey, if 120 km is covered by train and rest by car. It takes 20 minutes more, if 200 km is covered by train and rest by car. The ratio of the speed of the train to that of the car is:
- A. 2 : 3
 - B. 3 : 2
 - C. 4 : 3
 - D. 3 : 4
 - E. None of these
26. The distance between two places A and B is 320 km. A car departs from place A for place B at a speed of 55 kmph at 7 am. Another car departs from place B for

place A at a speed of 45 kmph at 11 am. At what time will both the cars meet each other?

- A. 11 am
- B. 12 noon
- C. 1 pm
- D. 12 : 30 pm
- E. 1 : 30 pm

27. A and B set out at the same time to walk towards each other respectively from a place P and Q 144 km apart. A walks at the constant speed of 8 km/h, while B walks 4 km in the first hour, 5 km in the second hour, 6 km in the third hour and so on. Then the “A” will meet “B” at?

- A. 36 km
- B. 72 km
- C. 56 km
- D. 26 km
- E. None of these

28. Aman left city A for city D via city B & city C and Bhanu left city B for city D via city C at the same time, they both reach city C after 5 hours and Aman reaches city D 66 minutes earlier than Bhanu. City D is 180 km away from city C. If Aman is travelling at 72 km/hr then find the distance between city B and city C is how much more than distance between city A and city B?

- A. 90 km
- B. 165 km
- C. 190 km
- D. 110 km
- E. 140 km

29. P takes four hours to cover a distance of ‘D’ km and Q covers “D – 10’ km in six hours. If speed of P is 100% more than Q, then what is the difference between distance travelled by P in eight hours & that of by Q in twelve hours ? (in km)

- A. 10
- B. 15
- C. 40
- D. 20
- E. 30

30. Veer starts from Dehradun at 3:00 pm and move towards Delhi at the speed of 90 km/hr, while Anurag leaves Delhi at 5:00 pm and move towards Dehradun at a

speed of 110 km/hr. If distance between Dehradun and Delhi is 1080 kms, then at what time veer and anurag meet each other?

- A. 7:30 pm
- B. 9:30 pm
- C. 10:00 pm
- D. 8:30 pm
- E. 9:45 pm

31. Abhishek and Ayush start travelling in same direction at 8km/hr and 13 km/hr respectively. After 4 hours, Abhishek doubled his speed and Ayush reduced his speed by 1 km/hr and reached the destination together. How long the entire journey last?

- A. 9 hr
- B. 8 hr
- C. 4 hr
- D. 7 hr
- E. 6 hr

32. There was a race of 3000 meter between A&B on a circular track of 750 meter. First time they meet during the race is after 5 minutes of starting of race. Find the time taken by B to complete the race, if he runs at half the speed of A.

- A. 20 minutes
- B. 18 minutes
- C. 15 minutes
- D. 10 minutes
- E. None of these

33. Sawan went to Kanpur from Delhi with a certain speed and return to Delhi by reducing his speed by $12\frac{1}{2}\%$. If distance between Delhi and Kanpur is 560 km and time taken by him to reach Kanpur from Delhi is 2.5 hour less than time taken by him to return to Delhi from Kanpur. Then find the time taken by him in whole journey.

- A. 32 hour
- B. 42 hour
- C. $37\frac{1}{2}$ hour
- D. $34\frac{1}{4}$ hour
- E. 35 hour

34. A car and a bus starts from point 'A' . After 'T' hours bus is 48 km ahead of car, while after '8' hours distance between bus and car is same as distance covered by bus in one hour. If relative speed of car and bus if they move towards each other is 240 km/hr, then how much distance can bus cover in $(T - \frac{1}{2})$ hour.

- A. 320 km
- B. 280 km
- C. 384 km
- D. 336 km
- E. 256 km

35. Karim, a tourist leaves Ellora on a bicycle. Having travelled for 1.5 hr at 16 km/hr, he makes a stop for 1.5 hr and then pedals on with the same speed. Four hours after Karim started journey, his friend and local guide Rahim leaves Ellora on a motorcycle and rides with a speed of 28 km/hr in the same direction as Karim had gone. What distance will they cover before Rahim overtakes Karim?

- A. 88 km
- B. 90.33 km
- C. 93.33 km
- D. 96.66 km
- E. 98 km

36. Rohit leave his home daily at 6:00 am by bike and reaches office on time. But one day he got stuck in traffic for 20 minutes and then further due to speed breaker his speed reduced by 20% for remaining 20% distance. Due to this he reached office 30 minutes late. What is the correct time to reach office.

- A. 10:20 am
- B. 10:15 am
- C. 9:00 am
- D. 9:20 am
- E. None of these

37. The time taken by Ramesh is $\frac{5}{7}$ th of that of Mahesh for the same length of race. If speed of Ramesh is 84 m/min. What is the speed of Mahesh?

- A. 60 m/s
- B. 42 m/s
- C. 60 km/hr
- D. 3.6 km/hr
- E. None of these

38. Ramesh travels 760 km to his home, partly by train and partly by car. He takes 8 hrs, if he travels 160 km by train and the rest by car. He takes 12 min more if he travels 240 km by train and rest by car. Speed of car is what percent more than speed of train?

- A. 5%
- B. 10%
- C. 15%
- D. 20%
- E. 25%

39. Distance between point A and Delhi Airport is 3600 km. If a pilot gets late by 50 minutes then to reach Delhi Airport from point A at scheduled time, he has to increase the speed of plane by 20%. Then find distance traveled by plane in 3 hr 45minutes, if it travels with increased speed ?

- A. 2840 km
- B. 3240 km
- C. 3280 km
- D. 3640 km
- E. 3840 km

40. Rahul travels D km at the speed of X kmph in t hours. If he travels the same distance at the speed of (x+4) kmph, he will reach in (t -2) hours.

Find the statement given in the above question which of the following can be determined.

- I. Value of x
 - II. Value of D
 - III. Value of t
 - IV. Can't be determined
- A. Only I and II
 - B. Only III and II
 - C. All I, II and III
 - D. Only IV
 - E. None of these

41. Andrew covers a distance of 0.5 km in 2 minutes and 40 seconds, while James covers the same distance in 3 minutes and 20 seconds. If both of them started together and at a uniform speed, by what distance will Andrew win a 25 km marathon?

- A. 3 km
- B. 4 km

- C. 2 km
- D. 5 km
- E. 6 km

42. Car A started from Mumbai to Chennai at 8 am and the car B started from Chennai to Mumbai at 10 am. By the time Car A travelled 20% of the total distance from Mumbai an car B also travelled the same distance from Chennai. What is the time taken by car B to reach Mumbai ?

Which of the following option is sufficient to find the answer?

- A. Ratio of the speed of Car A to car B is 1:3
- B. Speed of the car B is 60 kmph
- C. Speed of the car B is 40 kmph
- D. Distance between Chennai to Mumbai is 120 km
- E. None of these

43. A man runs at a uniform speed and covers 36 km. Had the speed been 6 kmph less, it would have taken one more hour to complete the distance ?

From the statement given in the above question which of the following can be determined.

- I. Initial speed of the man
- II. Initial time taken
- III. speed of the man in the later case
- IV. Time taken by the man in the later case

- A. Only I
- B. Only I & III
- C. Only IV
- D. Only II & IV
- E. All of these

44. The car A starts from S towards T at 10 am at the speed of ----- kmph and car B starts from T towards S at 12 pm at the speed of 180 kmph. If the distance between S and T is 560 km and the car meet other in ----- pm

- a. 60 kmph, 4pm
- b. 70 kmph , 2.30 pm
- c. 40 kmph, 4 pm
- d. 25 kmph, 5.20 pm
- A. All a,b,c and d
- B. Only a,c and d
- C. Only c and d
- D. Only a,b and d

E. Only c

45. A boy travels by car from A to B at the rate of 25 kmph and walk back at the rate of 4 kmph. The whole journey takes 348 min. Which of the following can be found ?

- I. Distance between A and B
 - II. Distance covered in 348 min
 - III. Average speed
 - IV. Time taken by car
- A. Only II and III
B. Only III
C. Only III and IV
D. All
E. None of these

46. Average speed of bike is 90 kmph. If the bike starts from S towards T and bike reached T in 8 hours and Bus travelled 60% of the distance travelled by bike in 8 hours. If bike reduced the average speed of 10 kmph and bus increased the speed by $11\frac{1}{9}\%$, then what is the total time taken by Bus and Bike reached T and S?

- A. 18 hours
B. 21 hours
C. 23 hours
D. 25 hours
E. None of these

47. A hare and a tortoise have a race along a circle of 100 yards diameter. The tortoise goes in one direction and the hare in the other. The hare starts after the tortoise has covered $\frac{1}{5}$ of its distance and that too leisurely. The hare and tortoise meet when the hare has covered only $\frac{1}{8}$ of the distance. By what factor should the hare increase its speed so as to tie the race?

- A. 37.80
B. 8
C. 40
D. 5
E. 15

48. Akash leaves mumbai at 6 am and reaches Bangalore at 10 am . Prakash leaves Bangalore at 8 am and reaches Mumbai at 11:30 am. At what time do they cross each other?

- A. 10 am
- B. 8:32 am
- C. 8:56 am
- D. 9:20 am
- E. None of these

49. Three cars P, Q and R covers a total distance of 2400 km. Difference between time taken by car Q and R is 1.8 hours more than the difference between time taken by P and R. If speed of P is decreased by 20%, then it will take 4.2 hours more to complete the distance. Speeds of car Q and R are in the ratio 5: 6 respectively. Time taken by Q and R are in the ratio 3: 4 respectively. Distance covered by car Q is 600 km which can be covered by car R in 12.5 hours. From the statement given in the above question, which of the following can be determined?

- I. Speed of car P
- II. Distance covered by car R
- III. Difference between time taken by car R and P
- IV. Time taken by car R

- A. All except I
- B. All except IV
- C. All except II
- D. All except III
- E. All I,II, III and IV

50. Two SUV cars start at the same time from Patna and Gaya, which are 110 km apart. If the two cars travel towards each other, they meet after one hour and if they travel in the same direction, the car from Patna overtakes the car from Gaya after 11 hours. What is the speed of the car starting from Gaya?

- A. 60 kmph
- B. 40 kmph
- C. 50 kmph
- D. 30 kmph
- E. 55 kmph