

SPEED, TIME & DISTANCE



BEST CONTENT FOR ALL BANKING EXAMS

Question 1: The distance of the School and house of Suresh is 80km. One day he was late by 1 hour than the normal time to leave for the college, so he increased his speed by 4km/h and thus he reached to college at the normal time. What is the changed speed of Suresh?

- A. 28 kmph
- B. 25 kmph
- C. 20 kmph
- D. 24 kmph

Question 2: Anita goes to College at 20 km/h and reaches college 4 minutes late. Next time she goes at 25 km/h and reaches the college 2 minutes earlier than the scheduled time. What is the distance of her school?

- A. 16 km
- B. 12 km
- C. 15 km
- D. 10 km

Question 3: Two places R and S are 800 km apart from each other. Two persons start from R towards S at an interval of 2 hours. Whereas A leaves R for S before B. The speeds of A and B are 40 kmph and 60 kmph respectively. B overtakes A at M, which is on the way from R to S. What is the ratio of time taken by A and B to meet at M?

- A. 1:3
- B. 1:2
- C. 1:4

D. 3:2

E. None of these

Question 4: Two places R and S are 800 km apart from each other. Two persons start from R towards S at an interval of 2 hours. Whereas A leaves R for S before B. The speeds of A and B are 40 kmph and 60 kmph respectively. B overtakes A at M, which is on the way from R to S. What is the extra time taken by A to reach at S?

A. 6hrs 20 minutes

B. 6hrs 40 minutes

C. 6hrs 30 minutes

D. 6hrs 10 minutes

Question 5: Ajay covers certain distance with his own speed but when he reduces his speed by 10kmph his time duration for the journey increases by 40 hours while if he increases his speed by 5 kmph from his original speed he takes 10 hours less than the original time taken. Find the distance covered by him.

A. 1000 km

B. 1200 km

C. 1500 km

D. 1800 km

Question 6: The driver of an ambulance sees a college bus 40 m ahead of him after 20 seconds, the college bus is 60 meter behind. If the speed of the ambulance is 30 km/h, what is the speed of the college bus?

A. 10 kmph

B. 12 kmph

C. 15 kmph

D. 22 kmph

Question 7: Two places R and S are 800 km apart from each other. Two persons start from R towards S at an interval of 2 hours. Whereas A leaves R for S before B. The speeds of A and B are 40 kmph and 60 kmph respectively. B overtakes A at M, which is on the way from R to S. What is the distance from R, where B overtakes A?

A. 260 km

B. 235 km

C. 240 km

D. 300 km

Question 8: Two rabbits start running towards each other, one from A to B and another from B to A. They cross each other after one hour and the first rabbit reaches B, $\frac{5}{6}$ hour before the second rabbit reaches A. If the distance between A and B is 50 km. what is the speed of the slower rabbit?

A. 20 kmph

B. 10 kmph

C. 15 kmph

D. 25 kmph

Question 9: Pranav walked at 5 kmph for certain part of the journey and then he took an auto for the remaining part of the journey travelling at 25 kmph. If he took 10 hours for the entire journey, what part of journey did he travelled by auto if the average speed of the entire journey be 17 kmph

A. 750 km

- B. 100 km
- C. 150 km
- D. 200 km

Question 10: 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

Question 11: A truck covers a distance of 376 km at a certain speed in 8 hours. How much time would a car take at an average speed which is 18 kmph more than that of the speed of the truck to cover a distance which is 14 km more than that travelled by the truck ?

- A. 6 hours
- B. 5 hours
- C. 7 hours
- D. 8 hours

Question 12: Two cars start together in the same direction from the same place. The first goes with uniform speed of 10 kmph. The second goes at a speed of 8 kmph in the first hour and increases its speed by $1/2$ kmph each succeeding hours. After how many hours will the second car overtake the first, if both cars go non stop?

- A. 8 hours

- B. 7 hours
- C. 6 hours
- D. 9 hours

Question 13: A car runs at the speed of 50 km per hour when not serviced and runs at 60 kmph when serviced. After servicing the car covers a certain distance in 6 hours. How much time will the car take to cover the same distance when not serviced?

- A. 8 hours 12 minutes
- B. 6 hours 15 minutes
- C. 8 hours 15 minutes
- D. 7 hours 12 minutes

Question 14: Two cars namely A and B start simultaneously from a certain place at the speed of 40 kmph and 55 kmph, respectively. The car B reaches the destination 2 hours earlier than A. What is the distance between the starting point and destination?

- A. 8 hours 12 minutes
- B. 6 hours 15 minutes
- C. 7 hours 20 minutes
- D. 7 hours 12 minutes

Question 15: A thief is spotted by a policeman from a distance of 200 metre. When the policeman starts chasing, the thief also starts running. If the speed of the thief be 16kmph and that of policeman be 20kmph, how far the thief will have run before he is overtaken?

- A. 800 m
- B. 700 m

- C. 650 m
- D. 750 m

Question 16: A bus travels at the rate of 54 kmph without stoppages and it travels at 45 kmph with stoppages. How many minutes does the bus stop on an average per hour?

- A. 8 minutes
- B. 6 minutes
- C. 10 minutes
- D. 4 minutes

Question 17: 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

Question 18: Anu normally takes 4 hours more than the time taken by Sachin to walk D km. If Anu doubles her speed, she can make it in 2 hours less than that of Sachin. How much time does Sachin require for walking D km?

- A. 10 hours
- B. 4 hours
- C. 8 hours
- D. 9 hours

Question 19: Sohail covers a distance by walking for 6 hours. While returning, his speed decreases by 2kmph and he takes 9 hours to cover the same distance. What was his speed while returning?

- A. 2 kmph
- B. 5 kmph
- C. 4 kmph
- D. 7 kmph

Question 20: A car reached a certain place 'Q' from 'P' in 35 min with an average speed of 69 kmph. If the average speed is increased by 36 kmph, then how long will it take to cover the same distance?

- A. 25 minutes
- B. 23 minutes
- C. 27 minutes
- D. 29 minutes

Question 21: John travelled from his town to city. John went to city by bicycle at the speed of 25 km/h and came back at the speed of 4 km/h. If John took 5 hours and 48 min to complete his journey, what is the distance between town and city ?

- a. 15 km
- b. 22 km
- c. 20 km
- d. 25 km

Question 22: Ram walks at a speed of 12 km/h. Today the day was very hot so walked at $\frac{5}{6}$ of his average speed. He arrived his school 10 minutes late. Find the

usual time he takes to cover the distance between his school and home?

- a.40 mins
- b.45 mins
- c.50 mins
- d.60 mins

Question 23: A car running at 65 km/h takes one hour to cover a distance. If the speed is reduced by 15 km/hour then in how much time it will cover the distance ?

- a.72 mins
- b.78 mins
- c.76 mins
- d.None of these

Question 24: In a 100 m race A runs at a speed of 1.66 m/s. If A gives a start of 4m to B and still beats him by 12 seconds. What is the speed of B ?

- a.1 m/s
- b.1.33 m/s
- c.1.25 m/s
- d.1.5 m/s

Question 25: 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

Question 26: 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) None of these

Question 27: A train 300 metres long is running at a speed of 90 km/hr. How many seconds will it take to cross a 200 metres long train running in the same direction at a speed of 60 km/hr?

(a) 70 sec

(c) 50 sec

(b) 60 sec

(d) None of these

Question 28: Two trains are running in opposite directions with the same speed. If the length of each train is 135 metres 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) None of these

Question 29: A and B are two stations. A train goes from A to B at 64 km/hr and returns to A at a slower speed. If its average speed for the whole journey is 56

km/hr, at what speed did it return?

- (a) 48 km/hr
- (b) 49.77 km/hr
- (c) 30 km/hr
- (d) 47.46 km/hr

Question 30: Ramesh sees a train passing over 1 km long bridge. The length of the train is half that of bridge. If the train clears the bridge in 2 minutes, the speed of the train is

- (a) 45 km/hr
- (b) 43 km/hr
- (c) 50 km/hr
- (d) None of these

Question 31: Amit started cycling along the boundaries of a square field from cover 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) cannot be determined

Question 32: A train 110 metres in length passes a man walking at the speed of 6 km/hr. against it in 6 seconds. The speed of the train in km per hour is

- (a) 60 km/hr
- (b) 45 km/hr
- (c) 50 km/hr
- (d) 55 km/hr

Question 33: Two runner start running together for a certain distance, one at 6 km/h and another at 10 km/h. The former arrives $1 \frac{3}{5}$ hours before the latter. The distance in Km is

- A) 28km
- B) 24km
- C) 20km
- D) 18km
- E) None

Question 34: A man completes a certain journey by a car. If he covered 30% of the distance at the speed of 20kmph. 60% of the distance at 40km/h and the remaining of the distance at 10 kmph, his average speed is:

- A) 36km/hr
- B) 28km/hr
- C) 16km/hr
- D) 25km/hr
- E) None

Question 35: A person can row $7 \frac{1}{2}$ km an hour in still water. Finds that it takes twice the time to row upstream than the time to row downstream. The speed of the stream is:

- A) 1.5km/hr
- B) 2km/hr
- C) 4km/hr
- D) 2.5km/hr
- E) None

Question 36: Cars take 15 hr to cover the distance of 150 km between P and Q. A bus starts from point P at

6.00 a.m. and another bus starts from point Q at 9.00 a.m. on the same day. When do the two cars meet?

- A) 3 PM
- B) 2.50 PM
- C) 1.30 PM
- D) 12 PM
- E) None

Question 37: A van complete a certain journey in 18 hour. It cover half the distance at 30 km/hr and the rest at 60 km/hr, The distance covered is ?

- A) 540km
- B) 650km
- C) 720km
- D) 760km
- E) None

Question 38: Two persons Shyam and Santhosh starts at the same time from Place A to B and proceed towards each other at 45 km/hr and 54 km/hr resp. When they meet it was found that one of them travelled 72km more than the other. the distance between the places in km.

- A) 735km
- B) 820km
- C) 792km
- D) 840km
- E) None

Question 39: A theft is reported to a policeman. The thief starts running and the policeman chases him. When the policeman starts chasing, the thief was at a distance of 250 meter. The thief and the policeman

run at the speed of 6 km/h and 8 km/h respectively. Find the time the policeman will take to catch the thief.

- A) 25min
- B) 30min
- C) 20min
- D) 40min
- E) None

Question 40: The distance between two stations A and B is 200 km. A train leaves A towards B at an average speed of 60 km/hr. After an hour, another train leaves B towards A at an average speed of 80 km/hr. The distance of the point where the two trains meet, from A is :

- A) 100km
- B) 140km
- C) 120km
- D) 180km
- E) None

Question 41: 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

Question 42: P and Q are two towns. Noel covers the distance from P to Q on cycle at 22 km/hr. However, he covers the distance from Q to P on foot at 8 km/hr. His average speed during the whole journey is :

- A) 12.8
- B) 11.62
- C) 12.55
- D) 11.73
- E) None

Question 43: 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

Question 44: A person travelled a distance of 30 km in 8 hours. He travelled partly on foot at the rate of 3 kmph and partly on bicycle at the rate of 5 kmph. The distance travelled on foot is?

- (a) 14 km
- (b) 15 km
- (c) 16 km
- (d) 17 km
- (e) 20 km

Question 45: A plane left 30 min later than its scheduled time to reach its destination 1500 km away.

In order to reach in time, it increases its speed by 250 km/hr. What is its original speed?

- (a) 1000 km/hr
- (b) 750 km/hr
- (c) 600 km/hr
- (d) 800 km/hr
- (e) 650 km/hr

Question 46: The fare of a bus is Rs x for the first five kilometers and Rs 13 per kilometre thereafter. If a passenger pays Rs 2,402/- for a journey of 187 kilometres, what is the value of x ?

- (a) Rs 29/-
- (b) Rs 39/-
- (c) Rs 36/-
- (d) Rs 31/-
- (e) Rs. 38/-

Question 47: A train covers 180 km distance in 4 hours. Another train covers the same distance in 1 hour less than that by previous train. What is the difference in the distances covered by these trains in one hour if they are moving in the same direction?

- (a) 45 km
- (b) 9 km
- (c) 40 km
- (d) 42 km
- (e) 15 km

Question 48.: If a man cycles at 10 kmph, then he arrives at a certain place at 1 pm. If he cycles at 15 kmph, he will arrive at the same place at 11 am. At what speed must he cycle to get there at noon?

- (a) 11 kmph
- (b) 12 kmph
- (c) 13 kmph
- (d) 14 kmph
- (e) 16 kmph

Question 49: Busses 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.3 km/hr
- b.4 km/hr
- c.5 km/hr
- d.7 km/hr
- e.None of these

Question 50: The distance between two cities A and B is 330km. A train starts from A at 8 (a)m. and travels towards B at 60 km/hr. Another train starts from B at 9 (a)m. and travels towards A at 75 km/hr. At what time do they meet?

- a.10 am.
- b.10 : 30 am.
- c.11 am.
- d.11 : 30 am.
- e.None of these

Question 51: Two trains are moving on two parallel tracks but in opposite directions. A person sitting in the train moving at the speed of 80 km/hr passes the second train in 18 seconds. If the length of the second train is 1000 m, its speed is?

- a. 100 km/hr
- b. 120 km/hr
- c. 140 km/hr
- d. 150 km/hr
- e. None of these

Question 52: In covering a distance of 30 km, Abhay takes 2 hours more than Sameer. If Abhay doubles his speed, then he would take 1 hour less than Sameer. Abhay's speed is?

- a. 5 kmph
- b. 6 kmph
- c. 6.25 kmph
- d. 7.5 kmph
- e. None of these

Question 53: It takes eight hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more, if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the cars is?

- a. 2 : 3
- b. 3 : 2
- c. 3 : 4
- d. 4 : 3
- e. None of these

Question 54: 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

Question 55: 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

Question 56: 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

Question 57: 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

Question 58: Two persons A and B start from the opposite ends of a 450 km straight track and run to and from between the two ends. The speed of the first person is 25 m/s and the speed of other is 35 m/s. They continue their motion for 10 hours. How many times did they pass each other?

- A. 1
- B. 4
- C. 3
- D. 2

Question 59: 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

Question 60: Mr.Kavin walks at $\frac{4}{5}$ of his normal speed and takes 60 minutes more than the usual time. What will be the new time taken by Mr. Kavin?

- A. 260 minutes
- B. 235 minutes
- C. 220 minutes
- D. 300 minutes

Question 61: A travel bus normally reaches its destination at 60 kmph in 20 hours. Find the speed of that travel bus at which it travels to reduce the time by 5 hours?

- A. 80 kmph
- B. 60 kmph
- C. 50 kmph
- D. 40 kmph

Question 62: A Lion starts chasing a Giraffe. It takes 4 hours to catch the Giraffe. If the speed of the Lion is 40 km/h. What is the speed of Giraffe?

- A. 20 km/h
- B. 50 km/h
- C. 40 km/h
- D. 70 km/h

Question 63: Anu and Purvi are running on a circular track of length 500m. The Speed of Anu is 40 m/s and that of Purvi is 30 m/s. They start from the same point at the same time in the same direction. When will they meet again for the first time?

- A. 25 s
- B. 23 s
- C. 50 s
- D. 48 s

Question 64: Two trains are running in opposite directions in the same speed. The length of each train is 120 meter. If they cross each other in 12 seconds, the speed of each train (in km/hr) is

- A. 30 Km/hr
- B. 36 Km/hr

C.80 Km/hr

D.90 Km/h

Question 65: Length of train is 130 meters and speed of train is 45 km/hour. This train can pass a bridge in 30 seconds, then find the length of the bridge.

A.230 meters

B.235 meters

C.240 meters

D.245 meters

Question 66: A 300 meter long train crosses a platform in 39 seconds while it crosses a signal pole in 18 seconds. What is the length of the platform.

A.310 meter

B.335 meter

C.345 meter

D.350 meter

Question 67: A jogger running at 9 kmph alongside a railway track is 240 metres ahead of the engine of a 120 metre long train running at 45 kmph in the same direction. In how much time will the train pass the jogger ?

A.30 seconds

B.32 seconds

C.34 seconds

D.36 seconds

Question 68: A train running at the speed of 60 km/hr crosses a pole in 9 seconds. Find the length of the train.

A.150 meter

B.145 meter

C.140 meter

D.135 meter

Question 69: A train speeds past a pole in 15 seconds and a platform 100 meter long in 25 seconds. What is length of the train ?

A.40 meter

B.145 meter

C.150 meter

D.155 meter

Question 70: How many seconds will a 500 meter long train take to cross a man walking with a speed of 3 km/hr in the direction of the moving train if the speed of the train is 63 km/hr

A.25 Seconds

B.28 Seconds

C.30 Seconds

D.35 Seconds

Question 71: A train overtakes two persons who are walking in the same direction in which the train is going, at the rate of 2 kmph and 4 kmph and passes them completely in 9 and 10 seconds respectively. Find the length of train ?

A.45 m

B.50 m

C.55 m

D..60 m

Question 72: A 270 metres long train running at the speed of 120 kmph crosses another train running in opposite direction at the speed of 80 kmph in 9 seconds. What is the length of the other train?

- A.220 meter
- B.225 meter
- C.230 meter
- D.235 meter

Question 73: Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes the slower train in 36 seconds. The length of each train is ?

- A.40 meter
- B.45 meter
- C.50 meter
- D.55 meter

Question 74: Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is ?

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

Question 75: Two trains 140 metre and 160 metre long run at the speed of 60 km/hr and 40 km/hr respectively in opposite direction on parallel tracks. What time these will take to cross each other ?

- A.10.7 Seconds
- B.10.8 Seconds
- C.10.9 Seconds
- D.11.8 Seconds

Question 76: Two trains 140 m and 160 m long run at the speed of 60 km/hr and 40 km/hr respectively in

opposite directions on parallel tracks. The time which they take to cross each other, is

- A. 9.8 seconds
- B. 10.8 seconds
- C. 11.8 seconds
- D. 12.8 seconds

Question 77:

A train overtakes two persons walking along a railway track. The first one walks at 4.5 km/hr. The other one walks at 5.4 km/hr. The train needs 8.4 and 8.5 seconds respectively to overtake them. What is the speed of the train if both the persons are walking in the same direction as the train?

- A. 66 km/hr
- B. 72 km/hr
- C. 78 km/hr
- D. 81 km/hr

Question 78:

Two stations A and B are 110 km apart on a straight line. One train starts from A at 7 a.m. and travels towards B at 20 kmph. Another train starts from B at 8 a.m. and travels towards A at a speed of 25 kmph. At what time will they meet?

- A. 9 a.m.
- B. 10 a.m.
- C. 10.30 a.m.

D. 11 a.m.

Question 79:

Two, trains, one from Howrah to Patna and the other from Patna to Howrah, start simultaneously. After they meet, the trains reach their destinations after 9 hours and 16 hours respectively. The ratio of their speeds is:

A. 2 : 3

B. 4 : 3

C. 6 : 7

D. 9 : 16

Question 80:

Two goods train each 500 m long, are running in opposite directions on parallel tracks. Their speeds are 45 km/hr and 30 km/hr respectively. Find the time taken by the slower train to pass the driver of the faster one.

A. 12 sec

B. 24 sec

C. 48 sec

D. 60 sec

Question 81: Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is:

A. 1 : 3

B.3 : 4

C.3 : 2

D.Data inadequate

E.None of these

Question 82: Two trains are moving in opposite directions @ 60 km/hr and 90 km/hr. Their lengths are 1.10 km and 0.9 km respectively. The time taken by the slower train to cross the faster train in seconds is:

A.36 sec

B.45 sec

C.48 sec

D.49 sec

E.None of these

Question 83: A train travelling at a speed of 75 mph enters a tunnel 3 miles long. The train is mile long. How long does it take for the train to pass through the tunnel from the moment the front enters to the moment the rear emerges?

A.2.5 min

B.3 min

C.3.2 min

D.3.5 min

E.None of these

Question 84: Two cogged wheels of which one has 32 cogs and other 54 cogs, work into each other. If the latter turns 80 times in three quarters of a minute, how often does the other turn in 8 seconds?

A.48

B.24

C.38

D.36

Question 85: Two trains started at the same time, one from A to B and the other from B to A . If they arrived at B and A respectively 4 hours and 9 hours after they passed each other the ratio of the speeds of the two trains was

A.2:1

B.3:2

C.4:3

D.5:4

Question 86: A train travelling at a speed of 75 mph enters a tunnel 312312miles long. The train is 1414mile long. How long does it take for the train to pass through the tunnel from the moment the front enters to the moment the rear emerges?

A.2.5min

B.3min

C.3.2min

D.3.5min

Question 87: A 270 metres long train running at the speed of 120 kmph crosses another train running in opposite direction at the speed of 80 kmph in 9 seconds. What is the length of the other train ?

A.230m

B.240m

C.260m

D.320m

Question 88: Train K crosses a stationary Train L in 50 seconds and a pole in 20 seconds with the same speed.

The length of the Train K is 240 meters. What is the length of stationary Train L ?

- A.60m
- B.120m
- C.240m
- D.360m

Question 89: A train is traveling at 48 kmph . It crosses another train having half of its length , traveling in opposite direction at 42 kmph, in 12 seconds. It also passes a railway platform in 45 seconds. What is the length of the platform?

- A.500
- B.400
- C.360
- D.480

Question 90: Two trains are moving in the same direction at 72 kmph and 36 kmph. The faster train crosses a girl sitting at window seat in the slower train in 32 seconds. Find the length of the faster train ?

- A.170m
- B.100m
- C.270m
- D.320m

Question 91: A train for Fathehpur leaves for every 2 hrs 30 min from Agra station. An announcement was made that train left 37 mins ago and next train comes at 17:00hrs. At what time was the announcement made ?

- A.15:07hrs
- B.15:20hrs

C.15:05hrs

D.15:00hrs

Question 92: Two trains of equal length, running with the speeds of 60 and 40 kmph, take 50 seconds to cross each other while they are running in the same direction. What time will they take to cross each other if they are running in opposite directions ?

A.10sec

B.11sec

C.12sec

D.8sec

Question 93: A train covers a distance between station A and station B in 45 min. If the speed of the train is reduced by 5 km/hr, then the same distance is covered in 48 min. What is the distance between the stations A and B ?

A.80kms

B.60kms

C.45kms

D.32kms

Question 94: Two trains, one from Hyderabad to Bangalore and the other from Bangalore to Hyderabad, start simultaneously. After they meet, the trains reach their destinations after 9 hours and 16 hours respectively. The ratio of their speeds is ?

A.3:4

B.4:3

C.2:3

D.3:2

Question 95: Two passenger trains start at the same hour in the day from two different stations and move towards each other at the rate of 16 kmph and 21 kmph respectively. When they meet, it is found that one train has traveled 60 km more than the other one. The distance between the two stations is ?

- A.387kms
- B.242kms
- C.145kms
- D.244kms

Question 96: The two trains of lengths 400 m, 600 m respectively, running at same directions. The faster train can cross the slower train in 180 sec, the speed of the slower train is 48 kmph. Then find the speed of faster train ?

- A.68km/h
- B.52km/h
- C.76km/h
- D.50km/h

Question 97: A train travelling with a speed of 60 km/hr catches another train travelling in the same direction and then leaves it 120m behind in 18 seconds. The speed of the second train is

- A.42km/h
- B.72km/h
- C.36km/h
- D.44km/h

Question 98: A train travelling at 48 kmph crosses another train, having half its length and travelling in

opposite direction at 42 kmph, in 12 sec. It also covers a bridge in 45 sec. Find the length of the bridge ?

- A.250m
- B.400m
- C.320m
- D.390m

Question 99: A passenger train covers the distance between station K and L, 40 minutes faster than a goods train. Find this distance between K and L if the average speed of the passenger train is 50 km/h and that of goods train is 30 km/h?

- A.50kms
- B.48kms
- C.46kms
- D.44kms

Question 100: Two trains approach each other at 20kmph and 24kmph from 2 places 240km apart. After how many hours they will meet ?

- A)5hrs
- B)5.25hrs
- C)5.30hrs
- D)5.45hrs

1. C

Explanation :

$$80/x - 80/(x+4) = 1$$

$$x(x+20) - 16(x+20) = 0$$

$$x = 16\text{kmph}$$

$$\text{Increased speed} = 20 \text{ kmph}$$

2. D

$$20 \times 25 / (25 - 20) \times 6 / 60 = 10.$$

3. D**Explanation :**

Time taken by B to reach at M = 4h

Time taken by A to reach at M = 6h

Ratio = 6:4 = 3:2

4. B**Explanation :**Time taken by A to reach at Q = $800/40 = 20$ hoursTime taken by B to reach at Q = $800/60 = 13$ hours
and 20 min

A takes 6hr 40 minutes extra time to reach at Q.

5. C**Explanation :**

$$x/(y - 10) - x/y = 40$$

$$x = 4y(y-10) \text{ ---(i)}$$

$$x/y - x/(y + 5) = 10$$

$$x = 2y(y + 5) \text{ --- (ii)}$$

From (i) and (ii) $\Rightarrow y = 25$; $x = 1500$

6. B**Explanation :**

Relative Speed = (Total distance)/total time

$$= (60+40) / 20 = 5 \text{ m/s} = (5*18)/5 = 18 \text{ kmph}$$

Relative Speed = (speed of ambulance - speed of College bus)

Speed of College bus = speed of ambulance - relative speed.

$$= 30-18 = 12 \text{ kmph.}$$

7. C**Explanation :**

$$\text{Distance between R and M} = 4 * 60 = 240$$

8. A**Explanation :**Let second rabbit takes x hr with speed s_2 First rabbit takes $x - 5/6$ hr with speed s_1

Total distance = 50km

$$S_1 = 50 / (x - (5/6))$$

$$S_2 = 50 / x$$

As they cross each other in 1hr...

Total speed = $s_1 + s_2$ Now, $T = D / S$

$$50 / (s_1 + s_2) = 1$$

$$x = 5/2, 1/3$$

Put $x = 5/2$ in $s_2 \rightarrow 20\text{km/hr}$ **9. C****Explanation :**Total distance = $17 * 10 = 170$ Let Journey travelled by auto in x hr

$$25 * x + (10 - x) * 5 = 170$$

$$25x + 50 - 5x = 170$$

$$x = 6$$

Required Distance = $6 * 25 = 150 \text{ km}$ **10. C****Explanation :**Distance covered in 3 minutes = $3 * (1000/60) = 50$ Now he has to cover $(500 + 50)\text{m}$ in $(30 - 3)$ minutesRequired speed = $(550/1000) / (27/60) = 11/9 \text{ km/h}$ **11. A****Explanation :**Speed of the truck = Distance/time = $376/8 = 47$

kmph

Now, speed of car = (speed of truck + 18) kmph = (47 + 18) = 65 kmph

Distance travelled by car = 376 + 14 = 390 km

Time taken by car = Distance/Speed = 390/65 = 6 hours.

12. D

Explanation :

The second car overtake the first car in x hours

Distance covered by the first car in x hours = Distance covered by the second car in x hours

$$10x = x/2[2a + (x-1)d] \quad 10x = x/2[2*8 + (x-1)1/2] \quad x = 40 - 31 = 9$$

13. D

Explanation :

$$\text{Time} = 60*6 / 50 = 7 \text{ hours } 12 \text{ mins}$$

14. C

Explanation :

Let the time taken by car A to reach destination is T hours

So, the time taken by car B to reach destination is (T - 2) hours.

$$S_1T_1 = S_2T_2$$

$$\Rightarrow 40(T) = 55(T - 2)$$

$$\Rightarrow 40T = 55T - 110$$

$$\Rightarrow 15T = 110$$

$$T = 7 \text{ hours } 20 \text{ minutes}$$

15. A

Explanation :

$$d = 200 \text{ m, } a = 16 \text{ kmph} = 40/9 \text{ m/s, } b = 20 \text{ kmph} =$$

50/9 m/s

Required Distance $D = d \cdot (a/b - a) \cdot b = 200 \cdot (40/9 - 10/9)$
 $= 800 \text{m}$

16. C

Explanation :

Due to stoppages, the bus can cover 9 km less per hour [54 - 45 = 9] Time taken to cover 9 km = $(9/54) \times 60 = 10$ minutes.

17. D

Explanation :

Let B and A takes T minutes and (T + 20) minutes respectively.

Speed Inversely proportional to time, So time taken by A and B is

$$(T + 20) : T = 1/2 : 1/3 = 3 : 2$$

$$\Rightarrow (T + 20)/T = 3/2$$

$$\Rightarrow 2T + 40 = 3T$$

$$T = 40$$

A takes $(T + 20) = (40 + 20) = 60$ min. If A had walked at double the speed then the time taken by A is 30 minutes.

18. C

Explanation :

Let Sachin takes x hours to walk D km.

Then, Anu takes (x + 4) hours to walk D km.

With double of the speed, Anu will take $(x + 4)/2$ hours.

$$x - (x + 4)/2 = 2$$

$$\Rightarrow 2x - (x + 4) = 4$$

$$\Rightarrow 2x - x - 4 = 4$$

$$x = 4 + 4 = 8 \text{ hours}$$

19. C

Explanation :

The speed of Sohail in return journey = x

$$6(x + 2) = 9x$$

$$\Rightarrow 6x + 12 = 9x$$

$$\Rightarrow 9x - 6x = 12$$

$$x = 4 \text{ kmph}$$

20. B

Explanation :

Distance between P and Q = $69 \times (35/60) \text{ km} = 161/4 \text{ km}$

New speed = $(69 + 36) \text{ kmph} = 105 \text{ kmph}$

Required time = $161 / (4 \times 105) \text{ hours}$

$$= (161 \times 60) / (4 \times 105) \text{ min}$$

$$= 23 \text{ minutes.}$$

21. C

Explanation :

$$\Rightarrow \text{Average speed of John} = \frac{2xy}{x+y} = \frac{2 \times 25 \times 4}{25 + 4} = \frac{200}{29} \text{ km/h}$$

$$\Rightarrow \text{Distance traveled} = \text{Speed} \times \text{Time} = \frac{200}{29} \times \frac{29}{5} = 40 \text{ Km}$$

$$\Rightarrow \text{Distance between city and town} = 40/2 = 20 \text{ km}$$

22. C

Explanation :

\Rightarrow If Ram is walking at $\frac{5}{6}$ of his usual speed that means he is taking $\frac{6}{5}$ of using time.

$$\Rightarrow \frac{6}{5} \text{ of usual time} - \text{usual time} = 10 \text{ mins}$$

⇒ $1/5$ of usual time = 10 mins

⇒ Usual time = 50 mins

23. B

Explanation :

⇒ Reduced speed = $65 - 15 = 50$ km/h

⇒ Now car will take $65/50 \times 60$ mins = 78 mins

24. B

Explanation :

⇒ Time taken by A to cover 100 meters = 60 seconds

⇒ Since A gives a start of 4 seconds then time takes by B = 72 seconds

⇒ B takes 72 seconds to cover 96 meters

⇒ Speed of B = $96/72 = 1.33$ m/s

25. C

Explanation :

⇒ While A covers 1000 meters, B can cover 900 meters

⇒ While B covers 1000 meters, C can cover 900 meters

⇒ Lets assume that all three of them are running same race. So when B runs 900 meters, C can run $900 \times 9/10 = 810$

⇒ So A can beat C by 190 meters.

26. C

Here, $S_1 = 42$ and $S_2 = 28$.

$$\therefore \text{Stoppage time/hr} = \frac{S_1 - S_2}{S_1} = \frac{42 - 28}{42}$$

$$= \frac{1}{3} \text{ hour} = 20 \text{ minutes}$$

27. B

Here $L_1 = 300\text{m}$, $L_2 = 200\text{m}$

$S_1 = 90\text{ km/hr}$ and $S_2 = 60\text{ km/hr}$

$S_1 - S_2 = 90 - 60 = 30\text{ km/hr} = 30 \times \frac{5}{18}\text{ m/s}$

$$\therefore \text{Time taken} = \frac{L_1 + L_2}{S_1 - S_2} = \frac{300 + 200}{30 \times \frac{5}{18}}$$

$$= \frac{500 \times 18}{30 \times 5} = 60\text{ sec.}$$

28. C

Let the speed of each train be $x\text{ m/sec}$

We have $L_1 = L_2 = 135\text{m}$

And $S_1 = S_2 = x\text{ m/sec}$

$$\therefore \text{Therefore time taken} = \frac{L_1 + L_2}{S_1 + S_2}$$

$$18 = \frac{135 + 135}{x + x}$$

$$\text{Or } x = \frac{270}{2 \times 18}\text{ m/s}$$

$$= \frac{270}{2 \times 18} \times \frac{18}{5}\text{ km/hr} = 27\text{ km/hr}$$

29. B

Let the required speed by x km/hr

$$\text{Then } \frac{2 \times 64 \times x}{64 + x} = 60$$

$$\therefore 128x = 64 \times 56 + 56x$$

$$\therefore x = \frac{64 \times 56}{72} = 49.77 \text{ km/hr}$$

30. A

Distance travelled in 2 minutes

$$= \left(1 + \frac{1}{2}\right) \text{ km i.e., } \frac{3}{2} \text{ kms.}$$

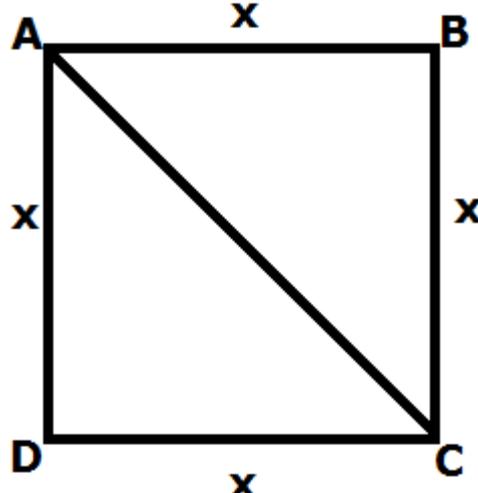
$$\therefore \text{Distance covered in 1 min.} = \frac{3}{2} \times \frac{1}{2} \text{ km}$$

$$\therefore \text{Distance covered in 1 hr.} = \left(\frac{3}{2} \times \frac{60}{2}\right) \text{ km}$$

$$= 45 \text{ km}$$

$$\therefore \text{Speed of the train} = 45 \text{ km/hr}$$

31. C



32.

Distance covered in $\frac{1}{2}$ hours = $2x$

$$= \frac{1}{2} \times 8 = 4$$

So $x = 2$

33. \Rightarrow area $x^2 = 4$

32. A

Let the speed of the train in km/hr = x

Then relative speed = $(x+6)$ km/hr

$$= (x+6) \times \frac{5}{18} \text{ m/sec}$$

It is given that $(x+6) \times \frac{5}{18} \times 6 = 110$

$$\therefore x = 60$$

\therefore Speed of train = 60 km/hr

33.B

Solution:

Let X be the distance, then

$$(X/6) - (X/10) = (8/5)$$

$$4x/60 = 8/5$$

$$X = 24 \text{ km.}$$

34. D

Solution:

Let the total distance be 100 km.

Average speed = total distance covered / time taken

$$\begin{aligned}
 &= 100 / [(30/20) + (60/40) + (10/10)] \\
 &= 100 / [(3/2) + (3/2) + (1)] \\
 &= 100 / [(3+3+2)/2] \\
 &= (100 \times 2) / 8 \\
 &= 25 \text{ kmph.}
 \end{aligned}$$

35. D

Solution:

Let the distance covered be x km and speed of stream = y kmph.

Speed downstream = $(15/2) + y$

Speed upstream = $(15/2) - y$

$[2x / ((15/2) + y)] = [x / ((15/2) - y)]$

$15 - 2y = (15/2) + y$

$3y = 15 - (15/2) = 15/2$

$y = 15/6 = 2.5$ kmph.

36. A

Solution:

Distance 150 km.

Speed of the cars = $150/15 = 10$ km/hr

By 9.00 a.m., the car from P covered 30 km.

Remaining distance = $150 - 30 = 120$ km

Relative speed of the cars = 20 km/hr.

Time taken to meet = $120/20 = 6$ hr after Q starts
ie 3pm meeting time.

37. C

Solution:

Let the length be x km.

$(x/2 \times 1/30) + (x/2 \times 1/60) = 18$

$\Rightarrow x/60 + x/120 = 18$

$$\Rightarrow 2x+x=18*120$$

$$X=720\text{km.}$$

38. C

Solution:

speed ratio $45:54=5:6$

Diff 1 $(6-5) == 72$

11 $(6+5) ? \Rightarrow 792\text{km.}$

39. B

Solution:

Policeman gains = $(8 - 6) \text{ km/h} = 2 \text{ km/h}$

Therefore, He will gain 250 meter in 30 minutes. Will catch the thief in 30 minutes.

40. C

Solution:

Let the distance be $x \text{ km.}$

$$x/60 - (200-x)/80 = 1$$

$$(4x-600+3x) / 240 = 1$$

$$7x - 600 = 240$$

$$X=120\text{km.}$$

41. A

Solution:

Suppose the man covers first distance in $x \text{ hrs}$ and second distance in $y \text{ hrs.}$ Then,

$$4x+5y=35 \text{ and } 5x+4y = 37$$

Solving the equations,

we get $x = 5$ and $y = 3$

Total time taken = $(5+3)\text{hrs} = 8 \text{ hrs.}$

42. D

Solution:

$$\text{Average speed} = (2 \times 22 \times 8) / (22 + 8)$$

$$= 352 / 30 = 11.73.$$

43. **B**

Distance travelled by the first car in 4 hours = Speed \times Time

$$= 55 \times 4 = 220 \text{ km}$$

$$\text{Remaining distance} = 320 - 220 = 100 \text{ km}$$

Time for both cars to meet = Distance / (Relative Speed)

$$= 100 / (55 + 45) = 100 / 100 = 1 \text{ hour}$$

\therefore Both the cars will meet after 1 hours means at (11am + 1) = 12 noon.

44. **B**

Let the distance traveled on foot be x km

$$\text{Then, } \frac{x}{3} + \frac{(30 - x)}{5} = 8$$

$$\text{Or, } 5x + 3(30 - x) = 120$$

$$\therefore x = 15 \text{ km}$$

45. **B**

Let the original time be T hours and original speed be x km/h

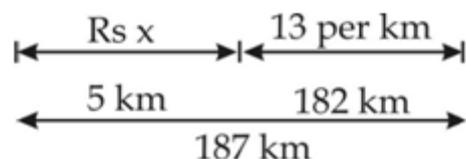
$$\frac{1500}{x} = T \dots (i)$$

$$\frac{1500}{x + 250} = T - \frac{30}{60} \dots (ii)$$

Solving equations (i) and (ii), we get

$$\text{Speed of plane} = x = 750 \text{ or } -1000 \text{ (not possible)}$$

$$\therefore x = 750 \text{ km/hr.}$$

46. **C**

47.

$$\text{Total fare of bus} = x + 13 \times 182$$

$$2402 = x + 2366$$

$$x = 36$$

\therefore Value of $x = \text{Rs } 36/-$

47.E

First train speed = 45 km/hr

2nd train speed = 60 km/hr

\therefore Difference in distance covered in 1 hr = 15 km

48. B

According to question,

$$T_1 - T_2 = 2 \text{ hours}$$

$$\text{Or } \frac{D}{10} - \frac{D}{15} = 2$$

By solving $D = 60 \text{ km}$

$$\text{In first case } T = \frac{60}{10} = 6 \text{ hours}$$

But for reaching 12 noon, $T = 5 \text{ hours}$ |

$$\text{So, } S = \frac{D}{T} = \frac{60}{5} = 12 \text{ kmph}$$

49. C

Distance covered in 10 minutes at 20 kmph = distance covered in 8 minutes at $(20+x)$ kmph

$$20 \times \frac{10}{60} = \frac{8}{60}(20+x)$$

$$200 = 160 + 8x$$

$$8x = 40$$

$$x = \frac{40}{8} = 5 \text{ kmph}$$

50. C

Distance travelled by first train in one hour

$$= 60 \times 1 = 60 \text{ km}$$

Therefore, distance between two train at 9 a.m.

$$= 330 - 60 = 270 \text{ km}$$

Now, Relative speed of two trains = $60 + 75 = 135$ km/hr

Time of meeting of two trains = $270/135 = 2$ hrs.

Therefore, both the trains will meet at $9 + 2 = 11$ A.M.

51. B

Let the speed of second train be x m/s.

$80 \text{ km/h} = (80 \times 5)/18 \text{ m/s}$

According to the question $1000/(x + (80 \times 5)/18) = 18$

$100 - 18x + 400$

$x = 666/18 \text{ m/s}$

$= 600/18 \times 18/5 \text{ km/h} = 120 \text{ km/h}$

52. A

Let Abhay's speed be x km/hr.

Then, $30/x - 30/2x = 3$

$6x = 30$

$x = 5 \text{ km/hr.}$

53. C

Let the speed of the train be x km/hr and that of the car be y km/hr.

Then, $120/x + 480/y = 8$ $1/x + 4/y = 1/15 \dots(i)$

And, $200/x + 400/y = 25/3$ $1/x + 2/y = 1/24 \dots(ii)$

Solving (i) and (ii), we get: $x = 60$ and $y = 80$.

Ratio of speeds = $60 : 80 = 3 : 4$.

54. C

Explanation :

Sum of their speeds = Distance/time = $576/12 = 48$ kmph

Respective Speed of Sofi and Priya = $(25 + 23) = 48$ kmph

55. B

Explanation :

Distance travelled by them in first hour = 12 km

Distance travelled by them in second hour = 13 km and so on

In 9 hours both will cover exactly 144 km.

In 9 hours each will cover half the total distance.

56. B

Explanation :

$$50 * 12/60 = 10/60 * (50+x)$$

$$600 = 500 + 10x$$

$$x = 10 \text{ kmph}$$

57. C

Explanation :

Total Distance = x

$$(x/2 * 30) + (x/2 * 40) = 7$$

$$x = 240$$

58. D

Explanation :

First person speed = $25 \text{ m/s} * 18/5 = 90 \text{ kmph}$

Second person speed = $35 \text{ m/s} * 18/5 = 126 \text{ kmph}$

First person covers $90 * 10 = 900 \text{ km}$

$$900/450 = 2$$

59. C

Explanation :

Total time taken,

$$[50/(x-10)] + 50/(x+10) = 12 \text{ hours.}$$

By solving the equation, we get

$$x = 15$$

Time is taken by the truck at faster speed =
 $50/(15+10) = 2$ hours.

60. D

Explanation :

$4/5$ of speed = $5/4$ of original time

$5/4$ of original time = original time + 60 minutes;

$1/4$ of original time = 60 minutes;

Thus, original time = $60 \times 4 = 240$ minutes = $240 + 60 = 300$ minutes

61. A

Explanation :

$$60 * 20 = x * 15$$

$$x = 80 \text{ kmph}$$

62. A

Explanation :

Giraffe Speed = x Kmph

$$4 = 4 * x / (40 - x)$$

$$x = 20 \text{ km/h.}$$

63. C

Explanation :

$$\text{Time} = \text{Distance} / \text{Relative Speed} = 500 / 10 = 50 \text{ s}$$

64. B

Explanation:

$$\text{Distance covered} = 120 + 120 = 240 \text{ m}$$

$$\text{Time} = 12 \text{ s}$$

Let the speed of each train = x .

Then relative velocity = $x + x = 2x$

$$2x = \text{distance} / \text{time} = 240 / 12 = 20 \text{ m/s}$$

Speed of each train = $x = 20/2 = 10 \text{ m/s}$

= $10 * 18/5 \text{ km/hr} = 36 \text{ km/hr}$

65. D

Explanation:

Let the length of bridge is X [as always we do :)]

Speed of train is = $45 * (5/18) \text{ m/sec} = 25/2 \text{ m/sec}$

Time = 30 seconds

Total distance = $130 + x$

We know Speed = distance/time

so,

$130 + x * 30 = 252 \Rightarrow 2(130 + x) = 750$

$x = 245 \text{ meters}$

So length of the bridge is 245 meters

66. D

Explanation:

Speed = Distance/time = $300/18 = 50/3 \text{ m/sec}$

Let the length of the platform be x meters

then

Distance = Speed * Time $x + 300 = 50/3 * 39 \Rightarrow 3(x + 300) = 19$

$50 \Rightarrow x = 350 \text{ meters}$

67. D

Explanation:

Speed of train relative to jogger = $(45 - 9) = 36 \text{ kmph}$

= $36 * (5/18) = 10 \text{ m/sec}$

Distance to cover = $240 + 120 = 360$ metres

Time = Distance/Speed

So,

Time = $360 / 10 = 36$ Seconds

68. A

Explanation:

Speed = $60 * (5/18)$ m/sec = $50/3$ m/sec

Length of Train(Distance) = Speed * Time

= $50/3 * 9 = 150$ meter

69. C

Explanation:

Let the length of the train is x meter and Speed of the train is y meter/second

Then $x/y = 15$ [because distance/speed = time]

=> $y = 15/x$

=> $x + 10025 = x * 15/x = 150$ meters => $x + 10025 = x * 15/x = 150$ meters

So length of the train is 150 meters

70. C

Explanation:

Relative Speed = $63 - 3 = 60$ Km/hr

= $60 * (5/18) = 50/3$ m/sec

Time taken to pass the man will ne
 $500 \times 350 = 30$ seconds

71. B

Explanation:

First person speed = $2 \times (5/18) = 5/9$ m/sec

Second person speed = $4 \times (5/18) = 10/9$ m/sec

Let the length of train is x metre and speed is y m/sec

then,

$xy - 59 = 9 \Rightarrow 9y - 5 = x \Rightarrow 9y - x = 5 \dots (i)$ Also, $xy - 109 = 1090y - 9x = 100 \dots (ii)$ from (i) and (ii), we

get, $x = 50$ $xy - 59 = 9 \Rightarrow 9y - 5 = x \Rightarrow 9y - x = 5 \dots (i)$ Also, $xy - 109 = 1090y - 9x = 100 \dots (ii)$ from (i) and (ii), we get, $x = 50$

So length of train is 50 metre

72. C

Explanation:

As trains are running in opposite directions so their relative speed will get added

So, Relative speed = $120 + 80 = 200$ kmph
 $= 200 \times (5/18) = 500/9$ m/sec

Let the length of other train is x meter then

$X + 2709 = 5009 \Rightarrow x + 270 = 500 \Rightarrow x = 230$
 $x + 270 = 500 \Rightarrow x = 230$

So the length of the train is 230 meters

73. C

Explanation:

Let the length of each train is x meter

Distance will be $x+x = 2x$

Relative Speed = $46-36 = 10$ km/hr

= $10*(5/18) = 25/9$ m/sec

Distance = Speed*Time

$2x = 259 * 36$ $2x = 100 \Rightarrow x = 50$ $2x = 259 * 36$ $2x = 100 \Rightarrow x = 50$

So length of both the trains are 50 meters.

74. B

Explanation:

Let the speeds of the two trains be x m/sec and y m/sec respectively.

Then, length of the first train = $27x$ metres,

Length of the second train = $17y$ metres.

[because distance = speed*time]

$27x + 17y$ $x + y = 23 \Rightarrow 27x + 17y = 23x + 23y \Rightarrow 4x = 6y \Rightarrow xy =$

64 $27x + 17y$ $x + y = 23 \Rightarrow 27x + 17y = 23x + 23y \Rightarrow 4x = 6y \Rightarrow x$

$y = 64$

So ratio of the speeds of train is 3:2

75. B

Explanation:

$$\begin{aligned} \text{Relative Speed} &= 60+40 = 100 \text{ Kmph} \\ &= 100*(5/18) = 250/9 \text{ m/sec} \end{aligned}$$

$$\text{Distance to be covered} = 140 + 160 = 300 \text{ metres}$$

$$\text{Time} = \text{Distance/Speed}$$

$$\text{Time} = 300 * \frac{9}{250} = 10.8 \text{ seconds}$$

76. B

Explanation:

$$\begin{aligned} \text{Relative Speed} &= 60+40 = 100 \text{ kmph} \\ &= 100*(5/18) = 250/9 \text{ m/sec} \end{aligned}$$

$$\text{Distance} = 140+160 = 300 \text{ meters}$$

$$\text{Time} = \text{Distance/Speed}$$

$$300 * \frac{9}{250} = 10.8 \text{ seconds}$$

So the time trains will take to cross each other will be 10.8 seconds

77. D

Explanation:

$$\frac{5}{5}$$

$$4.5 \text{ km/hr} \left(\frac{4.5}{x} \cdot 18 \right) \text{ m/sec} - 4 \text{ m/sec} = 1.25 \text{ m/sec,}$$

$$\text{and}$$

$$79. \quad 5.4 \text{ km/hr} \left(\frac{5.4}{x} \cdot \frac{5}{18} \right) \text{ m/sec} - \frac{3}{2} \text{ m/sec} = 1.5 \text{ m/sec.}$$

Let the speed of the train be x m/sec.

$$\text{Then, } (x - 1.25) \times 8.4 = (x - 1.5) \times 8.5$$

$$8.4x - 10.5 = 8.5x - 12.75$$

$$0.1x = 2.25$$

$$x = 22.5$$

$$\therefore \text{Speed of the train} = \left(22.5 \times \frac{18}{5} \right) \text{ km/hr} = 81 \text{ km/hr.}$$

78.B

Explanation:

Suppose they meet x hours after 7 a.m.

Distance covered by A in x hours = $20x$ km.

Distance covered by B in $(x - 1)$ hours = $25(x - 1)$ km.

$$\therefore 20x + 25(x - 1) = 110$$

$$\Rightarrow 45x = 135$$

$$\Rightarrow x = 3.$$

So, they meet at 10 a.m.

79.B

Explanation:

Let us name the trains as A and B. Then,

$$(\text{A's speed}) : (\text{B's speed}) = b : a = 16 : 9 = 4 : 3.$$

80.B

Explanation:

Relative speed = $(45 + 30)$ km/hr

$$= 75 \times \frac{5}{18} \text{ m/sec}$$

$$\left(\quad 18 \right)$$

$$= \left(\frac{125}{6} \right) \text{ m/sec.}$$

We have to find the time taken by the slower train to pass the DRIVER of the faster train and not the complete train. So, distance covered = Length of the slower train. Therefore, Distance covered = 500 m.

$$\therefore \text{ Required time} = \left(500 \times \frac{6}{125} \right) = 24 \text{ sec.}$$

81. C

Explanation - Let the speeds of the two trains be x m/sec and y m/sec respectively.

Then, length of the first train = $27x$ metres,

and length of the second train = $17y$ metres.

$$\frac{27x + 17y}{x + y} = 23$$

$$27x + 17y = 23x + 23y$$

$$4x = 6y$$

$$x = \frac{3}{2}y$$

$$y = \frac{2}{3}x$$

82. C

Explanation - Relative speed = $(60 + 90)$ km/hr

$$= 150 \times \frac{5}{18} \text{ m/sec}$$

$$= \frac{125}{3} \text{ m/sec.}$$

Distance covered = $(1.10 + 0.9)$ km = 2 km = 2000 m.

$$\text{Required time} = 2000 \times \frac{3}{125} \text{ sec} = 48 \text{ sec.}$$

83. B

Explanation -

$$\text{Total distance covered} = \frac{7}{2} + \frac{1}{4} \text{ miles}$$

$$= \frac{15}{4} \text{ miles.}$$

$$\text{Time taken} = \frac{15}{4} \text{ hrs}$$

$$= \frac{4 \times 75}{1} \text{ hrs}$$

$$= 20 \text{ hrs}$$

$$= \frac{20}{20} \times 60 \text{ min.}$$

$$= 3$$

84. B**Explanation:**

Less Cogs \Rightarrow more turns and less time \Rightarrow less turns

Cogs	Time	Turns	A	54	45	80	B	32	8	?	Co
gs	Time	Turns	A	54	45	80	B	32	8	?	

Number of turns required = $80 \times 54/32 \times 8/45 = 24$ times

85. B**Explanation:**

Note : If two trains (or bodies) start at the same time from points A and B towards each other and after crossing they take a and b sec in reaching B and A respectively, then:

$$(A's \text{ speed}) : (B's \text{ speed}) = (b : a)$$

Therefore, Ratio of the speeds of two trains = $9 - \sqrt{4} : 4 - \sqrt{9} = 3 : 2$

86. B**Explanation:**

Total distance covered = $(72+14)72+14$ miles

= 154×154 miles

Time taken = $(154 \times 75) / 154 \times 75$ hrs

= $120 / 120$ hrs

= $(120 \times 60) / 120 \times 60$ min

= 3 min

87. A

Explanation:

$$\begin{aligned} \text{Relative speed} &= (120 + 80) \text{ km/hr} \\ &= (200 \times 5/18) \text{ m/s} = (500/9) \text{ m/s} \end{aligned}$$

Let the length of the other train be x metres.

$$\text{Then, } x + 270/9 = 500/9$$

$$\Rightarrow x + 270 = 500$$

$$\Rightarrow x = 230$$

88. D

Explanation:

Speed of the Train K is given by $s = d/t = 240/20 = 12 \text{ m/s}$

Distance covered by Train K in 50 seconds = $12 \times 50 = 600 \text{ mts.}$

But it crosses Train L in 50 seconds

Therefore, the length of the Train L is = $600 - 240 = 360 \text{ mts.}$

89. B

Explanation:

Speed of train 1 = 48 kmph

Let the length of train 1 = 2x meter

Speed of train 2 = 42 kmph

Length of train 2 = x meter (because it is half of train 1's length)

$$\text{Distance} = 2x + x = 3x$$

$$\text{Relative speed} = 48 + 42 = 90 \text{ kmph} = (90 \times 5/18) \text{ m/s} = 25 \text{ m/s}$$

Time = 12 s

Distance/time = speed

$$\Rightarrow 3x/12 = 25 \Rightarrow (25 \times 12)/3$$

Length of the first train = $2x = 200$ meter

Time taken to cross the platform = 45 s

Speed of train 1 = 48 kmph = $480/36 = 40/3$ m/s

Distance = $200 + y$ [where y is the length of the platform]

$$x = 100\text{m} \Rightarrow 200 + y = 45 \times 40/3$$

$$\Rightarrow y = 400\text{m}$$

90. D

Explanation:

Relative speed = $(72 - 36) \times 5/18 = 2 \times 5 = 10$ mps.

Distance covered in 32 sec = $32 \times 10 = 320$ m.

The length of the faster train = 320 m.

91. A

Explanation:

Next train comes at 17:00 hrs.

So, last train will be = 17:00hrs - 2:30hrs

= 14:30hrs

Announcement made after 37 min of the last train.

So, 14:30hrs + 00:37 min

= 15:07 hrs.

92. A

Explanation:

Relative Speed = $60 - 40 = 20 \times 5/18 = 100/18$

Time = 50 Distance = $50 \times 100/18 = 2500/9$

Relative Speed = $60 + 40 = 100 \times 5/18$

Time = $2500/9 \times 18/500 = 10$ sec.

93. B

Explanation:

Let 'd' be the distance and 's' be the speed and 't' be the time

$$d = s \times t$$

$$45 \text{ mins} = \frac{3}{4} \text{ hr and } 48 \text{ mins} = \frac{4}{5} \text{ hr}$$

As distance is same in both cases;

$$s \left(\frac{3}{4} \right) = (s - 5) \left(\frac{4}{5} \right)$$

$$\frac{3s}{4} = \frac{4s - 20}{5}$$

$$15s = 16s - 80$$

$$s = 80 \text{ km.}$$

$$\Rightarrow d = 80 \times \frac{3}{4} = 60 \text{ kms.}$$

94. B

Explanation:

Let us name the trains as A and B.

Then, (A's speed) : (B's speed)

$$= \sqrt{b} : \sqrt{a} = \sqrt{16} : \sqrt{9} = 4:3$$

95.D

Explanation:

$$1 \text{ h} \text{ ----- } 5 \text{ kms}$$

$$? \text{ ----- } 60 \text{ kms}$$

$$\text{Time} = 12 \text{ hrs}$$

$$\text{Relative Speed} = 16 + 21 = 37 \text{ kmph}$$

$$T = 12 \text{ hrs}$$

$$D = S \times T = 37 \times 12 = 444 \text{ kms.}$$

96. A

Explanation:

Let the speed of the faster train be 'X' kmph,

Then their relative speed = $X - 48$ kmph

To cross slower train by faster train,

Distance need to be cover = $(400 + 600)m = 1$ km. and

Time required = 180 sec = $180/3600$ hr = $1/20$ hr.

Time = Distance/Speed

$$\Rightarrow 1/20 = 1/(x-48)$$

$$X = 68 \text{ kmph}$$

97. C

Explanation:

Given speed of the first train = 60 km/hr = $60 \times 5/18 = 50/3$ m/s

Let the speed of the second train = x m/s

Then, **the difference in the speed** is given by

$$503 - x = 12018503 - x = 12018$$

$$\Rightarrow x = 10 \text{ m/s}$$

$$\Rightarrow 10 \times 18/5 = 36 \text{ km/hr}$$

98. B

Explanation:

Let the length of the 1st train = L mts

Speed of 1st train = 48 kmph

Now the length of the 2nd train = $L/2$ mts

Speed of 2nd train = 42 kmph

Let the length of the bridge = D mts

$$\text{Distance} = L + L/2 = 3L/2$$

Relative speed = $48 + 42 = 90$ kmph = $90 \times 5/18 = 25$ m/s(opposite)

Time = 12 sec

$$\Rightarrow 3L/2 \times 25 = 12$$

$$\Rightarrow L = 200 \text{ mts}$$

Now it covers the bridge in 45 sec

$$\Rightarrow \text{distance} = D + 200$$

Time = 45 sec

$$\text{Speed} = 48 \times \frac{5}{18} = \frac{40}{3} \text{ m/s}$$

$$\Rightarrow D + 200 / (\frac{40}{3}) = 45$$

$$\Rightarrow D = 600 - 200 = 400 \text{ mts}$$

Hence, the length of the bridge = **400** mts.

99. A

Explanation:

Let the distance be 'd' kms.

According to the given data,

$$d \times 30 - d \times 50 = 4060 \text{ hrs} \Rightarrow 6d = 300 \Rightarrow d = 50 \text{ kms.}$$

100.D

Explanation :

$$20x + 24x = 240$$

$$44x = 240$$

$$X = 240 / 44 = 5.45 \text{ hrs}$$

[**Click here for Solutions**](#)

[**WhatsApp Group Join here**](#)

Mail us at: ambitiousbaba1@gmail.com

Follow our Blog for Regular Updates:- [Ambitious Baba](#)

Like & Follow our Facebook Page:- [Click here](#)

Join our Facebook Group:- [Click Here](#)

Telegram Group:- [Click Here](#)

Subscribe our YouTube channel:- [Click Here](#)

Follow us on Twitter:- [Click Here](#)

Join us on Linked In:- [Click Here](#)

“Thanks & Be Ambitious”

All the best for your Exams 😊

2022 Preparation Kit PDF

Most important PDF's for Bank, SSC, Railway and Other Government Exam : Download PDF Now

AATMA-NIRBHAR Series- Static GK/Awareness Practice Ebook PDF	Get PDF here
The Banking Awareness 500 MCQs E-book Bilingual (Hindi + English)	Get PDF here
AATMA-NIRBHAR Series- Banking Awareness Practice Ebook PDF	Get PDF here
Computer Awareness Capsule 2.0	Get PDF here
AATMA-NIRBHAR Series Quantitative Aptitude Topic-Wise PDF 2020	Get PDF here
Memory Based Puzzle E-book 2016-19 Exams Covered	Get PDF here
Caselet Data Interpretation 200 Questions	Get PDF here
Puzzle & Seating Arrangement E-Book for BANK PO MAINS (Vol-1)	Get PDF here
ARITHMETIC DATA INTERPRETATION 2.0 E-book	Get PDF here

[Click here to Subscribe Bank & Insurance MahaCombo Online Test Series](#)

Complete list of Test Series covered in the “All Banking Exams Test Series for” is given below:

Exam Covered	Number of Mock Tests
SBI PO Prelims	15
SBI PO Mains	10

SBI Clerk Prelims	15
SBI Clerk Mains	10
IBPS RRB PO Prelims	15
IBPS RRB PO Mains	10
IBPS RRB Clerk Prelims	15
IBPS RRB Clerk Mains	10
IBPS PO Prelims	15
IBPS PO Mains	10
IBPS Clerk Prelims	15
IBPS Clerk Mains	10
RBI Assistant Prelims	15
RBI Assistant Mains	10
LIC AAO Prelims	15
LIC AAO Mains	10
LIC Assistant Prelims	15
LIC Assistant Mains	10
SBI Apprentice	10
NIACL AO Prelims	15
NIACL AO Mains	10
Reasoning Section-Wise	30
Quantitative Aptitude Section-Wise	30
English Section-Wise	30
Topic-Wise (Quantitative Aptitude)	15
Arithmetic Data Interpretation	10
Caselet DI	10
Memory Based Mock (Prelims)	10
Banking Awareness	15

Static Awareness (GK)	15
Hindi Language for RRB	20
Computer Awareness	20
Current Affairs (Weekly Tests)	50
Topic Wise General Awareness Capsule Tests (Mains exam only)	15 (for Each Exam)
Other Banking Exams (Excepts SO)	



BANK & INSURANCE YEARLY SUBSCRIPTION

This package is subscription for All Banking and Insurance Examination with 1 year validity.

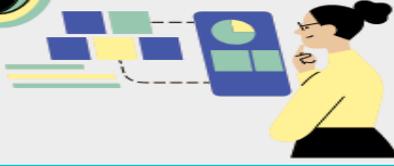
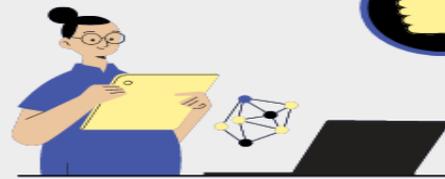


ALLEXAM Covered

IBPS, SBI, RBI, NABARD,
SEBI, NIACL, UIIC, NICL,
OICL etc.

LATEST PATTERN

All the content available in
the Test Series are Updated
and New Pattern.



Detailed Solution

Provided the Detailed
Explanation of Each and
Every Questions.

24/7 Access

You can access it anytime ,
Anywhere 24/7 through
Web or Mobile APP.



Complete Analysis

You can Analyse your Mock Test
Report and Compare with the
topper also.

All Level Covered

Prelims & Mains both the
exams are covered in this
package. its 1 stop Solution.



VISIT: TEST.AMBITIOUSBABA.COM

One Stop Solutions for all your exams and Provide the best path for your Success.