

The logo for Talent Battle is a shield-shaped emblem. It features a stylized white building with a flag on top, set against a background of green and yellow wavy lines. The shield has a purple border.

Train & Time Speed Distance

Talent Battle



- ***km/hr to m/sec conversion:***
- ***m/sec to km/hr conversion:***

- Time taken to cross each other = Sum of Lengths

Relative Speed \rightarrow Same ($u - v$), Opp ($u + v$)



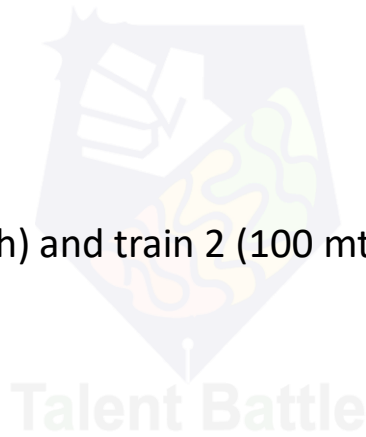
Time taken to cross each other = Sum of Lengths

Relative Speed \rightarrow Same ($u - v$), Opp ($u + v$)

1st Scenario : Train (200 mtr, 54 kmph) and Pole

2nd Scenario : Train (200 mtr, 54 kmph) and Platform (300 mtr)

- 3rd Scenario : Train (200 mtr, 54 kmph) and train 2 (100 mtr, 18 kmph, same direction)
- 4th Scenario : Train (200 mtr, 54 kmph) and train 2 (100 mtr, 18 kmph, opposite direction)
- 5th Scenario : Train (200 mtr, 54 kmph) and man (10 kmph, opposite direction)



1) A train 140 m long is running at 60 kmph. In how much time will it pass a platform 260m long?

a) 24 sec b) 17 sec c) 17 sec d) 30 sec

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$ -> Same ($u - v$), Opp ($u + v$)

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2) The length of the bridge, which a train 130 meters long and travelling at 45 km/hr can cross in 30 seconds, is:

- a) 200 m b) 245 m c) 250 m d) 255 m

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$

->Same ($u - v$), Opp ($u + v$)



3) A man is standing on a railway bridge which is 180m long. He finds a train crosses the bridge in 20 seconds but himself in 8 seconds. Find the length of the train.

- a) 120 m b) 140 m c) 160 m d) 180 m

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$ -> Same ($u - v$), Opp ($u + v$)



4) A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is:

a) 45 km/hr

b) 50 km/hr

c) 54 km.hr

d) 55 km/hr

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$

->Same ($u - v$), Opp ($u + v$)



5) Two trains are moving in same direction at 65 kmph & 45 kmph. The faster train crosses a man in slower train in 18 seconds. The length of faster train is:

- a) 120 m b) 130 m c) 100 m d) 145 m

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$ -> Same ($u - v$), Opp ($u + v$)



6) 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) 11 a.m. d) 10.30 a.m.

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$ -> Same ($u - v$), Opp ($u + v$)



7) Two trains of equal lengths take 10 seconds and 15 seconds respectively to cross a telegraph post. If the length of each train be 120 meters, in what time (in seconds) will they cross each other travelling in opposite direction?

a) 10

b) 15

c) 12

d) 20

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$

-> Same ($u - v$), Opp ($u + v$)

Talent Battle

- 8) What is the length of a running train crossing another 180 meter long train running in the opposite direction?

I) The relative speed of the two trains was 150 kmph.

II) The trains took 9 seconds to cross each other.

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$ -> Same
(u- v), Opp (u + v)

- a) I alone sufficient while II alone not sufficient to answer
- b) II alone sufficient while I alone not sufficient to answer
- c) Either I or II alone sufficient to answer
- d) Both I and II are not sufficient to answer
- e) Both I and II are necessary to answer

9) A train travelling at 48 kmph completely crosses another train having half its length and travelling in opposite direction at 42 kmph, in 12 seconds. It also passes a railway platform in 45 seconds. The length of the platform is:

- a) 400 m b) 450 m c) 500m d) 600 m

Time taken to cross each other = $\frac{\text{Sum of Lengths}}{\text{Relative Speed}}$ -> Same ($u - v$), Opp ($u + v$)



The logo for Talent Battle is a shield-shaped emblem. It features a stylized white hand with fingers spread, reaching upwards from a base of orange and yellow flames. The background of the shield is light green with darker green wavy lines. The text 'Talent Battle' is written in a light grey, sans-serif font below the shield.

Average Speed= Total Distance/ Total Time

10) The ratio between the speeds of two trains is 7 : 8. If the second train runs 400 km in 4 hours, then the speed of the first train is:

- a)70km/hr b)75km/hr c)84km/hr d)87.5km/hr**



Q.11) Bharani and Anand are 180 km apart. They started simultaneously towards each other at speeds of 10 kmph and 20 kmph respectively. In how many hours will they meet ?

a)5

b)4

c)6

d)7



12) Deepak walked at 4 kmph for a certain part of his journey and took an auto, travelling at 25 kmph for the rest of the journey. If he took 42 minutes for the entire journey, what part of the journey did he walk given that his average speed for the entire journey was 10 kmph?

- a)1 km b)2 km c)4 km d)5 km



13) A man moves from A to B at the rate of 4 km/hr. Had he moved at the rate of 3.67 km/hr, he would have taken 3 hours more to reach the destination. What is the distance between A and B?

- A) 33 kms
- B) 132 kms
- C) 36 kms
- D) 144 kms



14) A man driving his bike at 24 kmph reaches his office 5 minutes late. Had he driven 25% faster on an average he would have reached 4 minutes earlier than the scheduled time. How far is his office?

A) 24 km

B) 72 km

C) 18 km

D)None



15) Walking at $\frac{3}{4}$ of his normal speed. Abhishek is 16 minutes late in reaching his office. The usual time taken by him to cover the distance between his home & his office is

- a) 48 min b) 60 min c) 42min d) 62min**



16) Rishikant, during his journey travels from 20 min at a speed of 30 km/h, another 30 min at a speed of 50 km/h. & one hour at a speed of 50 km/h & 1 hour at a speed of 60 km/h. what is the avg velocity?

a) 51.18 km/h b) 63 km/h c) 39 km/h d) 48 km/h



17) Without stoppage, a train travels a certain distance with an average speed of 60 km, and with stoppage it covers the same distance with an avg speed of 40 km/h. on an avg, how many minutes per hour does the train stop during the journey?

a) 20 b) 15 c) 10 d) 10



18) An ant climbing up a vertical pole ascends 12 meters & slip down 5 meters In every alternative hrs. if the pole is 63 meters high how long will it take it to reach the top?

- **a) 18hrs b) 17hrs c) 16hrs 35min d) 16 hrs 40 min**



19) Lonavala & khandala are two station 600 km apart. A train start from lonavala & move towards khandala at the speed of 25 km/h. after two hour, another trains starts from khandala at the speed of 35 km/h. how far from lonavala will they cross each other?

- **a) 250km b) 300 km c) 279.166 km d) 475 km**



20) The Sinhagad Express left pune at noon sharp. Two hours letter, the Deccan Queen started from Pune in the same direction. The Deccan Queen overtook the sinhagad express at 8 p.m. find the avg speed of the two train over this journey if the sum of their avg speed is 70 km/h.

- a) 34.28 km/h b) 35km/h c) 50 km/h d) 12 km/h



