

TDS

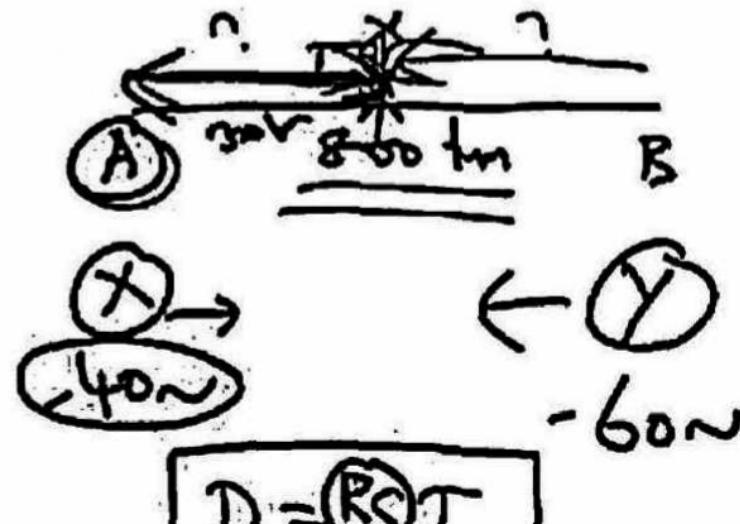
SET-4

S = D /
T

TWO STATIONS

TYPE

Q



$$\cancel{800 \text{ km}} = 100 \frac{\text{km}}{\text{hr}} \times \cancel{T}$$

$$MD_A = 40 \times 8 \\ = 320 \text{ km}$$

The distance between two stations A and B is 800 km. A train X starts from A and moves towards B at 40 km/h and another train Y starts from B and moves towards A at 60 km/h. How far from A will they cross each other?

- (1) 380 km
- (2) 320 km
- (3) 300 km
- (4) 360 km

(SSC CGL Tier-I (CBE))

Exam. 06.06.2019 (Shift-II)

2

$$RS = \frac{D}{T} \cdot 36,15$$

$$x + 10 = \frac{396}{H_2}$$

72

$$2x = 62$$

π≈3.1

Places A and B are 396 km apart. Train X leaves from A for B and train Y leaves from B for A at the same time on the same day on parallel tracks. Both trains meet

after $5\frac{1}{2}$ hours. The speed of train Y is 10 km/h more than that of train X. What is the speed (in km/h) of train Y?

- (1) 41 (2) 54
 (3) 31 (4) 56

(SSC CGL Tier-II (CBE)
Exam-2018, (12.09.2019))

③

$$D = S \times T$$
$$200 + 120 = 110 \times T$$

Time

Equation

$$\frac{x}{50} = \frac{x+120 \times 5}{60}$$
$$x = 600$$

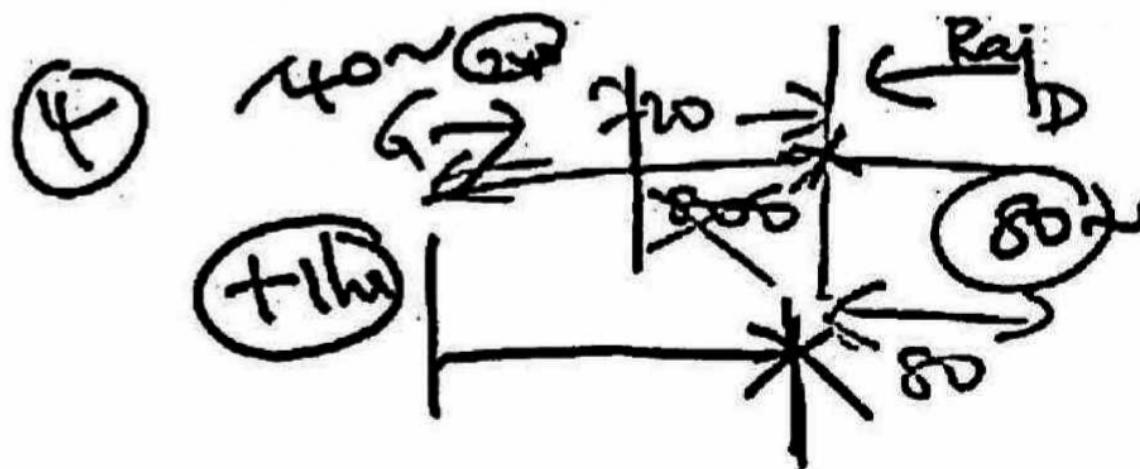
Two trains start from station A and B and travel towards each other at speeds of 50km/hr and 60km/hr respectively. At the time of their meeting, the second train has travelled 120 km more than the first. The distance between A and B is :-

[View solution](#)

A. 990 km

B. 1320km

C. 1200 km



$$T = \frac{D}{RS}$$

$$= \frac{200}{80+40}$$

$$T = 6 \text{ hours}$$

The distance between Gwalior and Delhi is 800 kms. Rajdhani Express starts from Delhi at 80km/h. 60 minutes later Gwalior express leaves Gwalior for Delhi on the parallel tracks at 40km/h. How far from Gwalior will they cross each other?

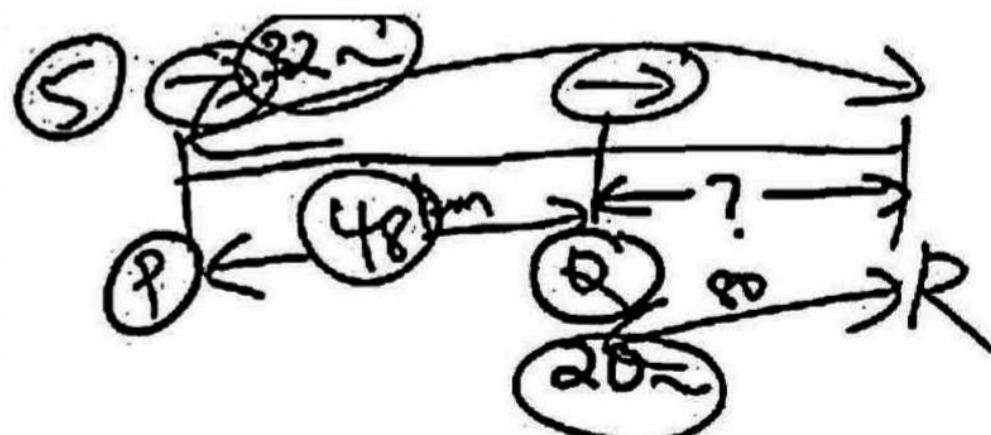
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A. 250 km

B. 360 km

C. 240 km



$$T = \frac{D}{RS}$$

$$= \frac{48}{12} \text{ hrs}$$

$$= 4 \text{ hrs}$$

$$PR = 32 \times 4$$

$$= 128$$

P and Q are 48 km away. Two trains running at the speed of 32 km/hr and 20 km/hr, respectively, start simultaneously from P and Q and travel in the same direction. They meet at a point R beyond Q. Distance QR is

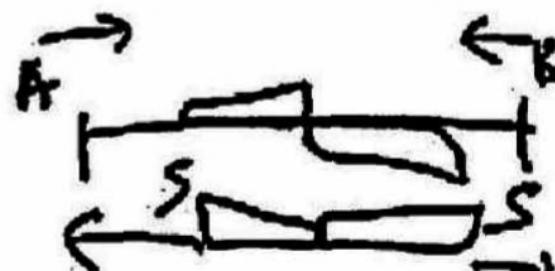
- (a) 126 km
- (b) 80 km
- (c) 48 km
- (d) 36 km

$$\frac{S_A}{S_B} = \sqrt{\frac{T_B}{T_A}}$$

FORMULA

TYPE

b



8
6/8

$$\frac{S_A}{16.8} = \sqrt{\frac{8 \times 8}{49}}$$

$$S_A = 16.8 \times \frac{8}{7}$$

$$\frac{2.4 \times 8}{19.2} =$$

formula

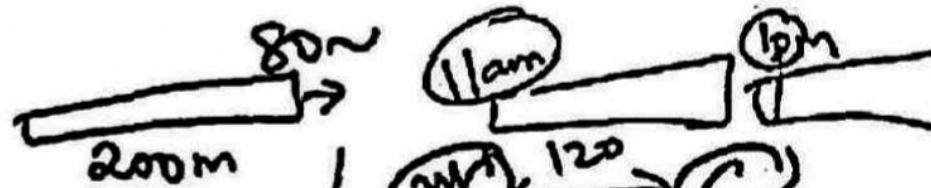
A and B are travelling towards each other from the points P and Q respectively. After crossing each

other, A and B take $6\frac{1}{8}$ hours and 8 hours, respectively, to reach their destinations Q and P, respectively. If the speed of B is 16.8 km/h, then the speed (in km/h) of A is.:

- (a) 20.8 (d) 20.4
- (b) 19.8
- (c) 19.2

(?)

120



$$T = \frac{D}{RS}$$

$$= \frac{120 \text{ km}}{10 \sim}$$

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



MC
40
C
120 km

A train of length 200m, travelling at 80 km/h, overtook a motorcyclist travelling in the same direction at a speed of 20 km/h at 11:00 am. At 1:00 pm, it overtook another cyclist travelling in the same direction at a speed of 10 km/h. At what time will the motorcyclist overtake the cyclist?

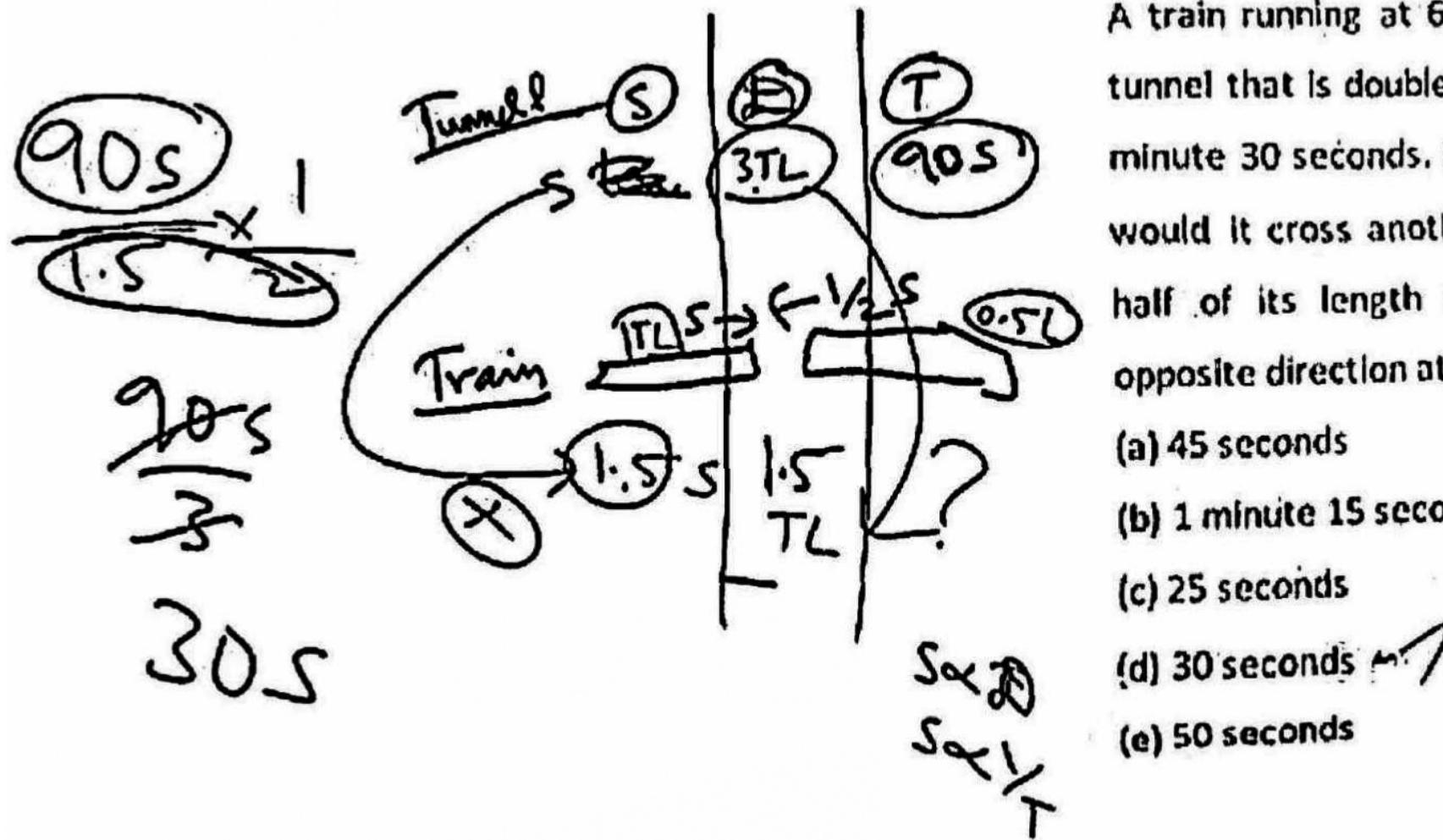
View solution

A. 1:00 am

B. 3:00 am

C. 11:00 pm

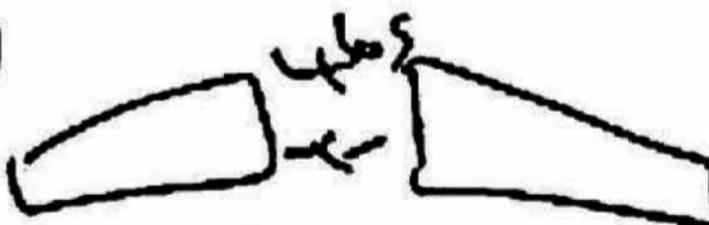
8)



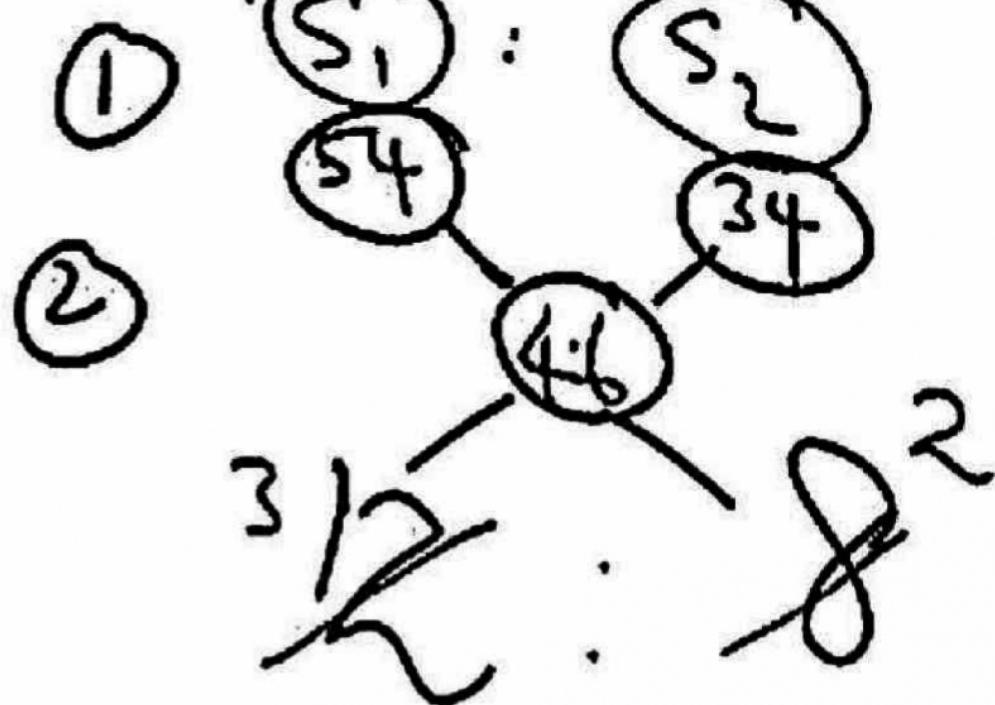
A train running at 65 kmph crosses a tunnel that is double of its length in 1 minute 30 seconds. In how much time would it cross another train, which is half of its length and coming from opposite direction at 32.5 km/hr?

- (a) 45 seconds
- (b) 1 minute 15 seconds
- (c) 25 seconds
- (d) 30 seconds
- (e) 50 seconds

Q



Alligation $\frac{74}{54} \leftarrow \rightarrow \frac{34}{54}$



Two trains running in opposite directions cross a man standing on the platform in 54 seconds and 34 seconds and they cross each other in 46 seconds. Find the ratio of their speeds.

- (a) 3:2
- (b) 2:3
- (c) 5:3
- (d) 3:5

10



Two trains running in opposite directions cross a man standing on the platform in 25 seconds and 32 seconds respectively and they cross each other in 30 seconds. The ratio of their speed is:

This question was previously asked in
SSC GD Previous Paper 28 (Held On: 6 March 2019 Shift 2), English

1. 4 : 3

2. 2 : 5

3. 5 : 6

4. 1 : 3

TRAPS

TYPE

11)

The diagram shows two parallel horizontal lines representing the ground. From the left end of the top line, a train of length L is moving towards the right. From the right end of the bottom line, another train of length L is moving towards the left. The distance between the two trains is labeled D . Arrows above the trains indicate their direction of motion.

Given:

- Time taken by Train 1 to cross a pole = 4 seconds
- Time taken by Train 2 to cross a pole = 6 seconds
- Length of Train 1 = L
- Length of Train 2 = L

Equations derived:

- $s_1 = \frac{L}{4}$
- $s_2 = \frac{L}{6}$
- $2s_1 = 3s_2$
- $T_{L_1} = T_{L_2}$
- $s_1 \times 4 = s_2 \times 6$
- $\frac{4s_1}{2} = \frac{6s_2}{3}$
- $s_1 - s_2$
- $T = \frac{D}{s_1 + s_2}$
- $T = \frac{D}{\frac{4s_1 + 6s_2}{3}}$
- $T = \frac{3D}{4s_1 + 6s_2}$
- $T = \frac{3D}{12s_2}$
- $T = \frac{D}{4s_2}$
- $T = \frac{D}{4 \cdot \frac{L}{4}} = D$
- $T = 24$

Two trains of same length take 4 seconds and 6 seconds to cross a pole. If both the trains are running in the same direction, then how long will they take to cross each other?

- (a) 24 seconds
- (b) 36 seconds
- (c) 40 seconds
- (d) 42 seconds

12)

$$Ss_1 = 7s_2$$

$$T = Ss_1 + 7s_2$$

$$(5) \quad Ss_1 - s_2$$

$$= 35 \times s_1 \times 5$$

~~25%~~

$$T = 35s$$

2 trains of equal length can cross a pole in 5 sec and 7 sec respectively. In what time they will cross each other if they are going in the same direction?

1. 40 sec

2. 15 sec

3. 28 sec

4. 35 sec

(13)

$$13s_1 = 26s_2$$

$$s_1 = 2s_2$$

Two trains of equal lengths take 13 seconds and 26 seconds, respectively, to cross a pole. If these trains are moving in the same direction, then how long will they take to cross each other?

$$\frac{13 \times s_2}{13s_2} = \frac{26s_2}{13s_1 + 26s_2} \times 13$$
$$\frac{13s_2}{26s_2} = \frac{13s_1 + 26s_2}{13s_1 + 26s_2}$$

This question was previously asked in
SSC GD Constable (2022) Official Paper
(Held On : 23 Jan 2023 Shift 3)

[View all SSC GD Constable Papers >](#)

1. 40 seconds
2. 50 seconds
3. 39 seconds
4. 52 seconds