# đず doubtnut 

India's Number 1 Education App

## MATHS

## BOOKS - S CHAND IIT JEE

## FOUNDATION

## DISTANCE TIME AND SPEED

Example

1. A persons croses a 600 m long street in 5
minutes. What is his speed in km per hour?
2. A truck covers a distance of 550 metres in 1 minute whereas a bus covers a distance of 33 km in 45 minutes. What is the ratio of their speeds.

## - Watch Video Solution

3. A man walks at a speed of $4 \mathrm{~km} / \mathrm{hr}$ and runs
at a speed of $8 \mathrm{~km} / \mathrm{hr}$. How much time will the
man require to cover a distance of 24 km if he completes half of his journey walking and half running?

## D Watch Video Solution

4. In a 800 metre race, $A$ defeated $B$ by 15 seconds. If $A^{\prime} s$ speed was $8 \mathrm{~km} / \mathrm{hr}$, the speed of $B$ was $\frac{16}{27} k m / h r$ (b) $\frac{27}{16} \mathrm{~km} / \mathrm{hr}$
$7 \frac{17}{25} k m / h r$ (d) $8 \frac{17}{25} k m / h r$

## - Watch Video Solution

5. A scooterist completes a certain journey in

10 hours. He covers half the distance at 30 $\mathrm{km} / \mathrm{hr}$ and the rest at $70 \mathrm{~km} / \mathrm{hr}$. What is the total distance of the journey?

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6. A persons pedals from his house to his office at a speed of $x_{1} \mathrm{~km} / \mathrm{hour}$ and returns by the same route at a speed of $x_{2} \mathrm{~km} / \mathrm{hour}$. What is his average speed?
7. A man can reach a certain place in 30 hours.

If the reduces his speed by $\frac{1}{15}$ th he goes 10 km less in that time. Find his speed. $4 \mathrm{~km} / \mathrm{hr}$
b. $5 \mathrm{~km} / \mathrm{hr}$ c. $5 \frac{1}{2} \mathrm{~km} / \mathrm{hr}$ d. $6 \mathrm{~km} / \mathrm{hr}$

## D Watch Video Solution

8. A tractor is moving with a speed of 20 $\mathrm{km} /$ hour , x km ahead of a truch moving with a speed of $35 \mathrm{~km} /$ hour. If it takes 20 minutes for
a truck to overtake the tractor, then what is $x$ equal to?

## D Watch Video Solution

9. A train running between two stations $A$ and
$B$ arrives at its destinations 10 minutes late
when its speed is $50 \mathrm{~km} /$ hour and 50 minutes
late when its speed is $30 \mathrm{~km} / \mathrm{hr}$. How far is station $A$ from $B$ ?

## - Watch Video Solution

10. A person drives his car for 3 hours at a speed of $40 \mathrm{~km} / \mathrm{hr}$ and for 4.5 hour at a speed of $60 \mathrm{~km} / \mathrm{hr}$. At the end of it he find that he has covered $\frac{3}{5}$ of the total distance. What is the uniform speed with which he should further drive to cover the remaining distance in 4 hours?

## - Watch Video Solution

11. Walking at three - fourth of his usual speed , a man covers a certain distance in 2 hour
more than the time he takes to cover the
distance at his usual speed. What is the time taken by him to cover the same distance with his usual speed?

## - Watch Video Solution

12. A students rides on a bicycle at $8 \mathrm{~km} / \mathrm{hr}$ and reaches his school 2.5 minutes late. The next day he increases his speed to $10 \mathrm{~km} / \mathrm{hr}$ and reaches the school 5 minutes early. How far is the school from his house?

## Watch Video Solution

13. A train 156 m long passes a telegraph pole in 13 seconds find the speed of the train in km/hr.

## - Watch Video Solution

14. A train takes 9 seconds to cross a pole. If the speed of the train is $60 \mathrm{Km} / \mathrm{h}$, the length of the train is
15. A goods train runs at a speed of $72 \mathrm{~km} / \mathrm{hr}$ and across a 250 m long platform in 26 seconds. What is the length of the goods train?

## D Watch Video Solution

16. A 264 m long train moves past an electric pole in 20 seconds. What is the speed of the train in $\mathrm{km} / \mathrm{hr}$ ?

## - Watch Video Solution

17. The length of a train and that of a platform are equal. If with the speed of $54 \mathrm{~km} / \mathrm{hr}$, the train crosses the platform in $1 \frac{1}{2}$ minutes, then what is the length of the platform in metres?

## - Watch Video Solution

Question Bank 14 A

1. A car moves with a speed of $80 \mathrm{~km} / \mathrm{hr}$. What
is the speed of the car in metres per second?

$$
\begin{aligned}
& \text { A. } 22 \frac{2}{9} \mathrm{~m} / \mathrm{sec} \\
& \text { B. } 8 \frac{\mathrm{~m}}{\mathrm{sec}} \\
& \text { C. } 20 \frac{1}{9} \frac{\mathrm{~m}}{\mathrm{sec}} \\
& \text { D. } 8 \frac{2}{3} \frac{\mathrm{~m}}{\mathrm{sec}}
\end{aligned}
$$

Answer: A

- Watch Video Solution

2. A man covers first half of its journey at 12
$\mathrm{km} / \mathrm{hr}$ and the rest at $4 \mathrm{~km} / \mathrm{hr}$. His average
speed is
A. $3 \mathrm{~km} / \mathrm{hr}$
B. $6 \mathrm{~km} / \mathrm{hr}$.
C. $4.5 \mathrm{~km} / \mathrm{hr}$
D. $9 \mathrm{~km} / \mathrm{hr}$

Answer: B

D Watch Video Solution
3. The speeds of $A$ and $B$ are in the ratio 3:4. $A$
takes 20 minutes more than B to reach a destination. In what time does $A$ reach the destination. $1 \frac{1}{3}$ hours b. $1 \frac{2}{3}$ hours c. 2 hours d. $2 \frac{2}{3}$ hours
A. $1 \frac{1}{3}$ hours
B. 2 hours
C. $1 \frac{2}{3}$ hours
D. $2 \frac{2}{3}$ hours
4. Two trains approach each other at $30 \mathrm{~km} / \mathrm{hr}$ and $27 \mathrm{~km} / \mathrm{hr}$ from two places 342 km apart.

After how many hours do they meet?
A. 5 hours
B. 6 hours
C. $1 \frac{2}{3}$ hours
D. $2 \frac{2}{3}$ hours
5. A runs 100 metres in 11 seconds and $B$ runs

100 metres in 12 seconds. The head start which
must be given to $B$ for race to be completed in
11 seconds.
A. 8 m
B. $8 \frac{1}{4} \mathrm{~m}$
C. $8 \frac{1}{3} \mathrm{~m}$
D. $8 \frac{1}{2} m$

Answer: C

## - Watch Video Solution

6. A man can walk uphill at the rate of $2 \frac{1}{2}$ $\mathrm{km} / \mathrm{hr}$ and downhill at the rate of $3 \frac{1}{4} \mathrm{~km} / \mathrm{hr}$. If the total time required to walk a certain distance up the hill and return to the starting point was 4 hr 36 min , then what was the distance walked up the hill by the man? 4 km b. $4 \frac{1}{2} \mathrm{~km} \mathrm{c} .5 \frac{1}{2} \mathrm{~km}$ d. $6 \frac{1}{2} \mathrm{~km}$
A. $6 \frac{1}{2} \mathrm{~km}$
B. $5 \frac{1}{2} \mathrm{~km}$
C. $4 \frac{1}{2} \mathrm{~km}$
D. 4 km

Answer: A

## D Watch Video Solution

7. A person wishes to reach his destination 90
km away in three hours but for the first half of
the journey his speed was $20 \mathrm{~km} / \mathrm{hr}$. His
average speed for the rest of the journey should be
A. $40 \mathrm{~km} / \mathrm{hour}$
B. $0.75 \mathrm{~km} / \mathrm{min}$
C. $1 \mathrm{~km} / \mathrm{min}$
D. $65 \mathrm{~km} / \mathrm{hour}$

Answer: A

D Watch Video Solution
8. A car travels a distance of 45 km at a speed of $15 \mathrm{~km} / \mathrm{hr}$. It covers the next 50 km of its journey at the speed of $25 \mathrm{~km} / \mathrm{hr}$ and the last 25 km of its journey at the speed of $15 \mathrm{~km} / \mathrm{hr}$. What is the average speed of the car?
A. $40 \mathrm{~km} / \mathrm{hr}$
B. $24 \mathrm{~km} / \mathrm{hr}$
C. $15 \mathrm{~km} / \mathrm{hr}$
D. $18 \mathrm{~km} / \mathrm{hr}$

Answer: D

## - Watch Video Solution

9. A car travels a distance of 45 km at a speed of $15 \mathrm{~km} / \mathrm{hr}$. It covers the next 50 km of its journey at the speed of $25 \mathrm{~km} / \mathrm{hr}$ and the last 25 km of its journey at the speed of $15 \mathrm{~km} / \mathrm{hr}$. What is the average speed of the car?
A. 50 km
B. 40 km
C. 30 km

## D. 60 km

## Answer: C

## D Watch Video Solution

10. A car travelling with of $\frac{5}{7}$ its usual speed
covers 42 km in 1 hour 40 min 48 sec . What is
the usual speed of the car?
A. $17 \frac{6}{7} \mathrm{~km} / \mathrm{hr}$
B. $25 \mathrm{~km} / \mathrm{hr}$
C. $30 \mathrm{~km} / \mathrm{hr}$

D. $35 \mathrm{~km} / \mathrm{hr}$

## Answer: D

## D Watch Video Solution

11. A car can finish a certain journey in 10 hours
at the speed of $48 \mathrm{~km} / /$ hour.By how much
should its speed be increased so that it may
take only 8 hours to cover the same distance?
A. $6 \mathrm{~km} / \mathrm{hour}$
B. $7.5 \mathrm{~km} / \mathrm{hour}$
C. $12 \mathrm{~km} / \mathrm{hour}$
D. $15 \mathrm{~km} / \mathrm{hr}$

## Answer: C

## D Watch Video Solution

12. Excluding stoppages, the speed of a train is
$45 \mathrm{~km} / \mathrm{hr}$ and including stoppages it is 36
$\mathrm{km} / \mathrm{hr}$. For how many minutes does the train stop per hour?
A. 10
B. 12
C. 15
D. 18

Answer: B

D Watch Video Solution
13. A locomotive driver travelling at $72 \mathrm{~km} / \mathrm{hr}$
finds a signal 210 metres ahead of him indicating that he should stop. He instantly applies brakes to stop the train. The train retards uniformly and stops 10 metres before the signal post. What time did he take to stop the train?
A. 5 seconds
B. 10 seconds
C. 15 seconds

## D. 20 seconds

## Answer: B

## D Watch Video Solution

14. A runs twice as fast as $B$ and $B$ runs thrice
as fast as C. The distance covered by C in 72
minutes, will be covered by A in $12 m \in$ utes
b. $\quad 16 m \in$ utes $\quad$ c. $\quad 18 m \in$ utes $\quad$ d.
$24 m \in$ utes
A. 18 min
B. 24 min
C. 16 min
D. 12 min

## Answer: D

## D Watch Video Solution

15. A car runs at a speed of $40 \mathrm{~km} / \mathrm{hr}$ when not serviced and runs at $60 \mathrm{~km} / \mathrm{hr}$ when serviced.

After servicing the car covers a certain distance in 5 hours. How much time will the
car take to cover the same distance when not serviced?
A. 8 hours
B. 7.5 hour
C. 6 hours
D. 7 hours

Answer: B
( Watch Video Solution
16. A train starts from Agra to Mathura at a
speed of $60 \mathrm{~km} / \mathrm{hr}$ and reaches there in 45
$\min$. If on return its speed is reduced by $10 \%$,
how long will it take to reach Agra from

Mathura?
A. 1 hr
B. 50 min
C. 1 hr 20 min
D. 49 min

Answer: B

## - Watch Video Solution

17. Samir drove at the speed of $45 \mathrm{~km} / \mathrm{hr}$ 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 $40 \mathrm{~km} / \mathrm{hr}$. How many kilometres did he drive each way?
A. 250 km
B. 360 km
C. 310 km

## D. 275 km

## Answer: B

## D Watch Video Solution

18. A certain distance is covered at acertain
speed. If half of the distance is covered in
double time, the ratio of the two speeds is
A. $4: 1$
B. 1: 4
C. $2: 1$
D. 1:2

Answer: A

## - Watch Video Solution

19. Paschini Express left Delhi for Mumbai at
14.30 hrs travelling at a speed of 60 kmph and

August Kranti Express left Delhi for Mumbai
on the same day at 16.30 hrs travelling at a speed of 80 kmph . How far away from Delhi
will the two trains meet (excluding stoppages)? 120 km b. 360 km c. 480 km d . 500 km
A. 120 km
B. 360 km
C. 480 km
D. 500 km

Answer: C

D Watch Video Solution
20. $A$ and $B$ start simultaneously from a certain point in North and South directions on motorcycles. The speed of $A$ is $80 \mathrm{~km} / \mathrm{hr}$ and that of $B$ is $65 \mathrm{~km} / \mathrm{hr}$. What is the distance between $A$ and $B$ after 12 minutes?
A. 14.5 km
B. 29 km
C. 36.2 km
D. 39 km

## - Watch Video Solution

21. The distance between Bandel and Asansol
is 100 km . A leaves Bandel for Asansol and
walks at the rate of $3 \mathrm{~km} / \mathrm{hr} .3 \mathrm{hrs}$ later, B
starts from Asansol for Bandel and walks at 3.5
$\mathrm{km} / \mathrm{hr}$. Find the distance from Asansol where they would meet?
A. 51 km
B. 49 km
C. 53 km

## D. 52 km

## Answer: B

## D Watch Video Solution

22. A star is $8.1 \times 10^{13} \mathrm{~km}$ away from the earth. Suppose light travels at the speed of
$3.0 \times 10^{5} \mathrm{~km}$ per second. How long will it take
the light from the star to reach the earth?
$7.5 \times 10^{3}$ hours $\quad$ b. $\quad 7.5 \times 10^{4}$ hours
c.
$2.7 \times 10^{10}$ seconds d. $2.7 \times 10^{11}$ seconds
A. $7.5 \times 10^{3} \mathrm{hrs}$.
B. $7.5 \times 10^{4} \mathrm{hrs}$.
C. $2.7 \times 10^{10} \mathrm{~km}$
D. $2.7 \times 10^{11} \mathrm{sec}$.

Answer: B

## D Watch Video Solution

23. A takes 2 hours more than B to walk $d \mathrm{~km}$, but /it A doubles his speed, then he can make it in hour less than $B$. How much time does $B$
require for walking $d k m ? \frac{d}{2}$ hours b.
3 hours c. 4 hours d. $\frac{2 d}{3}$ hours
A. $\frac{d}{2}$ hours
B. 3 hours
C. 4 hours
D. $\frac{2 d}{3}$ hours

Answer: C
24. A boy is running at a speed of $p \mathrm{kmph}$ to
cover a distance of 1 km . but ,m due to the
slippery ground, his speed is reduced by $q$ kmph $(p>q)$. if he takes $r$ hours to cover the distance then $\frac{1}{r}=p-q$ b. $r=p-q$ c.

$$
\frac{1}{r}=p+q \mathrm{~d} . r=p+q
$$

$$
\text { A. } \frac{1}{r}=(p-q)
$$

$$
\text { B. } r=(p-q)
$$

$$
\text { c. } \frac{1}{r}=(p+q)
$$

$$
\text { D. } r=(p+q)
$$

Answer: A

## - Watch Video Solution

25. A walks at a uniform rate of 4 km an hour;
and 4 hours after his start, B bicycles after him
at the uniform rate of 10 km an hour. How far
from the starting point will $B$ catch $A$ ?
26. 7 km b. 18.6 km c. 21.5 km d. 26.7 km
A. 16.7 km
B. 18.6 km
C. 21.5 km
D. 26.7 km

## Answer: D

## D Watch Video Solution

26. An express train travelled at a average speed of 100 kmph stopping for 3 minutes after 75 km . a local train travelled at a speed of

50 kmph , stopping for 1 minute after every 25 km . if the trains began travelling at the same
time, how many kilometres did the locals train travelling the tie it took the express train to travel 600 km ? 287.5 km b. 307.5 km c. 325 km d. 396 km
A. 6 hrs 21 min
B. 6 hrs 24 min
C. 6 hrs 27 min
D. 6 hrs 30 min

## Answer: A

27. Two trains start form stations $A$ and $B$ and
travel towards each other at a speed of 50
kmph and 60 kmph respectively. A the time of
their meeting, the second train had travelled
120 km more than the first. The distance
between A and B is 600 km b. 1440 km c .

1320 km d. 1660 km
A. 990 km
B. 1200 km
C. 1320 km

## D. 1440 km

## Answer: C

## D Watch Video Solution

28. In a kilometre race, $A$ beats $B$ by 30 seconds and $B$ beats $C$ by 15 seconds. If $A$ beats $C$ by 180 m , the time taken by $A$ to run 1 kilometre, is (a) $200 \mathrm{sec}(\mathrm{b}) 205 \mathrm{sec}(\mathrm{c}) 210 \mathrm{sec}$
(d) 250 sec
A. 250 seconds
B. 205 seconds
C. 200 seconds
D. 210 seconds

Answer: B

- Watch Video Solution

29. A man takes 6 hours 30 min in going by a
cycle and coming back by scooter. He would
have lost 2 hours 10 min by going on cycle
both ways. How long would it take him to go by scooter both ways?
A. 2 hrs
B. $4 \frac{1}{3} \mathrm{hrs}$
C. $3 \frac{1}{3} \mathrm{hrs}$
D. $5 \frac{1}{3} \mathrm{hrs}$

Answer: B
( Watch Video Solution
30. A students rides on a bicycle at $8 \mathrm{~km} / \mathrm{hr}$ and reaches his school 2.5 minutes late, The next day he-increases the speed to $10 \mathrm{~km} / \mathrm{hr}$ and reaches school 5 minutes early. How far is the school from the house?
A. 6 km
B. 4 km
C. 5 km
D. 4.5 km

## Question Bank 14 B

1. A 180 - metre long train crosses a man standing on the platform in 6 seconds. What is the speed of the train?
A. $90 \mathrm{~km} / \mathrm{hr}$
B. $108 \mathrm{~km} / \mathrm{hr}$
C. $120 \mathrm{~km} / \mathrm{hr}$

D. $88 \mathrm{~km} / \mathrm{hr}$

## Answer: B

## D Watch Video Solution

2. A train running at a speed of $84 \mathrm{~km} / \mathrm{hour}$ crosses an electric pole in 9 seconds. What is the length of the train in metres?
A. 126
B. 630

## C. 210

D. 70

## Answer: C

## D Watch Video Solution

3. A train 110 m long takes three seconds to pass a standing man. How long is the platform
if the train passes through it in 15 seconds moving with the same speed?
A. 440 m
B. 400 m
C. 550 m
D. 450 m

## Answer: C

## D Watch Video Solution

4. A train speeding at $120 \mathrm{~km} / \mathrm{hr}$ crosses an electric pole in 9 seconds and a platform in 24 seconds. What is the length of the platform?
A. 500 m
B. 800 m
C. 300 m
D. 1100 m

Answer: A

- Watch Video Solution

5. A train passes a pole in 15 seconds and a
platform 100 m long in 25 seconds. Then find
the length of the train.
A. 125 m
B. 135 m
C. 150 m
D. 175 m

Answer: C

## D Watch Video Solution

6. A train passes a platform 90 m long in 30 seconds and a man standing on the platform
in 15 second. The speed of the train is a.
$12.4 \mathrm{~km} / \mathrm{hr}$ b. $14.6 \mathrm{~km} / \mathrm{hr}$ c. $18.4 \mathrm{~km} / \mathrm{hr}$ d. $121.6 \mathrm{~km} / \mathrm{hr}$
A. $12.4 \mathrm{~km} / \mathrm{hr}$
B. $14.6 \mathrm{~km} / \mathrm{hr}$
C. $18.4 \mathrm{~km} / \mathrm{hr}$
D. $21.6 \mathrm{~km} / \mathrm{hr}$

Answer: D
( Watch Video Solution

## 7. Sabarmati express takes 18 seconds to pass

 completely through a station 162 m long and15 seconds through another station 120 m long. The length of the Sabarmati express is :
A. 70
B. 80
C. 90
D. 105

Answer: C
8. A train, 150 m long, takes 30 seconds to
cross ' bridge 500 m long. How much time will
the train, take to cross a platform 370 m long?
18 sec b. $24 \sec \mathrm{c} .30 \sec \mathrm{~d} .36 \mathrm{sec}$
A. 36 sec
B. 30 sec
C. 24 sec
D. 18 sec

## Answer: C

## D Watch Video Solution

9. A 120 metre long train is running at a speed of 90 k/her. It will cross a railway platform 230 m long in $4 \frac{4}{5}$ seconds b. 7 seconds c. $9 \frac{1}{5}$ seconds d. 14 seconds
A. $4 \frac{4}{5}$ seconds
B. $9 \frac{1}{5}$ seconds
C. 7 seconds

## D. 14 seconds

## Answer: D

## D Watch Video Solution

10. A passenger train runs at the rate of 80
kmph. It starts from the station, 6 hours after
a goods train leaves the station. The passenger train overtakes the goods train after 4 hours. The speed of goods train is
$32 \mathrm{~km} / \mathrm{hr}$ b. $45 \mathrm{~km} / \mathrm{hr}$ c. $64 \mathrm{~km} / \mathrm{hr}$ d.
$50 \mathrm{~km} / \mathrm{hr}$
A. $48 \mathrm{~km} / \mathrm{hr}$
B. $60 \mathrm{~km} / \mathrm{hr}$
C. $32 \mathrm{~km} / \mathrm{hr}$
D. $80 \mathrm{~km} / \mathrm{hr}$

Answer: C
( Watch Video Solution
11. A train $X$ starts from a place at a speed of 50 km/hr. After one hour, another train Y
starts from the same place at a speed of 70 $\mathrm{km} / \mathrm{hr}$. After how much time will Y cross X ?
A. 3 hrs
B. $2 \frac{3}{4} \mathrm{hrs}$
C. $3 \frac{1}{2} \mathrm{hrs}$
D. $2 \frac{1}{4} \mathrm{hrs}$

## Answer: C

12. A man in a train notices that he can count

21 telephone posts in one minute. If they are
known to be 50 metres apart, then at what speed is the train travelling? $55 \mathrm{~km} / \mathrm{hr} \mathrm{b}$. $60 \mathrm{~km} / \mathrm{hr}$ c. $57 \mathrm{~km} / \mathrm{hr}$ d. $63 \mathrm{~km} / \mathrm{hr}$
A. $57 \mathrm{~km} / \mathrm{hr}$
B. $60 \mathrm{~km} / \mathrm{hr}$
C. $63 \mathrm{~km} / \mathrm{hr}$.
D. $55 \mathrm{~km} / \mathrm{hr}$

Answer: B

## D Watch Video Solution

13. The distance of the sun from the earth is one hundred forty million four hundred thousand kilometers and light travels from the former to the latter in 7 minutes and fifty eight seconds. The velocity of light per second is :
A. $3 \times 10^{5} \mathrm{~km} / \mathrm{sec}$
B. $0.3 \times 10^{5} \mathrm{~km} / \mathrm{sec}$
C. $30 \times 10^{5} \mathrm{~km} / \mathrm{sec}$
D. None of these

Answer: A

## D Watch Video Solution

14. A man covered a distance of 2000 km in 18
hours partly by bus at $72 \mathrm{~km} / \mathrm{hr}$ and partly by train at $160 \mathrm{~km} / \mathrm{hr}$. The distance covered by bus is
A. 860 km
B. 640 km
C. 1280 km
D. 720 km

## Answer: D

## D Watch Video Solution

15. A man takes 4 h 20 minutes in walking to a certain place and riding back. If he walk on
both sides he loses 1 h . The time he would take by riding both ways is:
A. 3 h 20 min
B. 2 h 20 min
C. 4 h 20 min
D. 1 h 20 min

Answer: A
( Watch Video Solution
16. A car covers 4 successive 3 km stretches at speeds of $10 \mathrm{~km} / \mathrm{hr}, 20 \mathrm{~km} / \mathrm{hr}, 30 \mathrm{~km} / \mathrm{hr}$ and 60 $\mathrm{km} / \mathrm{hr}$ respectively. The average speed of the car for the entire journey is
A. $15 \mathrm{~km} / \mathrm{hr}$
B. $35 \mathrm{~km} / \mathrm{hr}$
C. $20 \mathrm{~km} / \mathrm{hr}$
D. $25 \mathrm{~km} / \mathrm{hr}$

Answer: C
17. Moving at $\frac{5}{6}$ of its usual speed, a train is 10 minutes late. Its usual time to cover the journey is:
A. 40 min
B. 50 min
C. 35 min
D. 55 min

Answer: B
18. If a train runs at 40 kmph , it reaches its destination late by 11 minutes but if it runs at 50 kmph , it is late by 5 minutes only. The correct time for the train to complete its journey is $13 m \in \mathrm{~b} .15 m \in \mathrm{c} .19 m \in \mathrm{~d}$. $21 m \in$
A. 13 min
B. 15 min
C. 19 min

## D. 21 min

## Answer: C

## D Watch Video Solution

19. The distance between two cities $A$ and $B$ is

330 km . A train starts from A at 8 a.m. travels towards B at $60 \mathrm{~km} / \mathrm{hr}$.

Another train starts from B at 9 a.m. and travels towards A at $75 \mathrm{~km} / \mathrm{hr}$. At what time do they meet?
A. 10 a.m.
B. 10.30 a.m.
C. 11 a.m.
D. 11. 30 a.m.

## Answer: C

## D Watch Video Solution

20. A train passes a station platform in 36 second, a man standing on the platform in 20 seconds. it speed of the train is $54 \mathrm{~km} / \mathrm{hr}$,
what is the of the platform? 225 mb b. 240 mc .
$230 m$ d. $235 m$
A. 120 m
B. 240 m
C. 300 m
D. None of these

Answer: B
( Watch Video Solution
21. A motor car starts with a speed of $70 \mathrm{~km} / \mathrm{hr}$
with its speed increasing every two hours by
$10 \mathrm{~km} / \mathrm{hr}$. In how many hours will it cover 345 kms?

> А. $2 \frac{1}{4} h$
> В. $4 \frac{1}{2} h$
C. $4 h 5 \mathrm{~min}$
D. Can not be determined

Answer: B
22. A person sets to cover a distance of 12 km in 45 minutes. If he covers $\frac{3}{4}$ of the distance in
2 $\frac{2}{3}$ rd time, what should be his speed to cover the remaining distance in the remaining time?
A. $16 \mathrm{~km} / \mathrm{hr}$
B. $8 \mathrm{~km} / \mathrm{hr}$
C. $12 \mathrm{~km} / \mathrm{hr}$
D. $14 \mathrm{~km} / \mathrm{hr}$

## Answer: C

## - View Text Solution

## Self Assessment Sheet 14

1. The distance of the sun from the earth is
one hundred forty million four hundred
thousand kilometers and light travels from the
former to the latter in 7 minutes and fifty eight seconds. The velocity of light per second is :
A. $3 \times 10^{5} \mathrm{~km} / \mathrm{sec}$
B. $0.3 \times 10^{5} \mathrm{~km} / \mathrm{sec}$
C. $30 \times 10^{5} \mathrm{~km} / \mathrm{sec}$
D. None of these

Answer: A

D Watch Video Solution
2. A man covered a distance of 2000 km in 18
hours partly by bus at $72 \mathrm{~km} / \mathrm{hr}$ and partly by
train at $160 \mathrm{~km} / \mathrm{hr}$. The distance covered by bus is
A. 860 km
B. 640 km
C. 1280 km
D. 720 km

Answer: D
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3. A man takes 4 h 20 minutes in walking to a certain place and riding back. If he walk on both sides he loses 1 h . The time he would take by riding both ways is :
A. 3 h 20 min
B. 2 h 20 min
C. 4 h 20 min
D. 1 h 20 min

Answer: A
4. A car covers 4 successive 3 km stretches at speeds of $10 \mathrm{~km} / \mathrm{hr}, 20 \mathrm{~km} / \mathrm{hr}, 30 \mathrm{~km} / \mathrm{hr}$ and 60 $\mathrm{km} / \mathrm{hr}$ respectively. The average speed of the car for the entire journey is
A. $15 \mathrm{~km} / \mathrm{hr}$
B. $35 \mathrm{~km} / \mathrm{hr}$
C. $20 \mathrm{~km} / \mathrm{hr}$
D. $25 \mathrm{~km} / \mathrm{hr}$

## Answer: C

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5. Moving at $\frac{5}{6}$ of its usual speed, a train is 10 minutes "late. Its usual time to cover the joumey is:
A. 40 min
B. 50 min
C. 35 min
D. 55 min

Answer: B

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6. If a train runs at 40 kmph , it reaches its
destination late by 11 minutes but if it runs at
50 kmph , it is late by 5 minutes only. The correct time for the train to complete its
journey is $13 m \in$ b. $15 m \in$ c. $19 m \in \mathrm{~d}$.
$21 m \in$
A. 13 min
B. 15 min
C. 19 min
D. 21 min

## Answer: C

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7. The distance between two cities $A$ and $B$ is

330 km . A train starts from A at 8 a.m. travels towards B at 60km/hr .

Another train starts from $B$ at 9 a.m. and
travels towards A at $75 \mathrm{~km} / \mathrm{hr}$. At what time do they meet?
A. 10 a.m.
B. 10.30 a.m.
C. 11 .a.m.
D. 11.30 a.m.

Answer: C
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8. A train passes a station platform in 36 second, a man standing on the platform in 20
seconds. it speed of the train is $54 \mathrm{~km} / \mathrm{hr}$, what is the of the platform? 225 mb b. 240 mc .
$230 m$ d. $235 m$
A. 120 m
B. 240 m
C. 300 m
D. None of these

Answer: B

# 9. A motor car starts with a speed of $70 \mathrm{~km} / \mathrm{hr}$ 

with its speed increasing every two hours by
$10 \mathrm{~km} / \mathrm{hr}$. In how many hours will it cover 345 kms?

> A. $2 \frac{1}{4} h$
> B. $4 \frac{1}{2} h$
C. $4 h 5 \mathrm{~min}$
D. None of these

Answer: B

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10. A persons sets to cover a distance of 12 km 3 in 45 minutes. If he covers $\frac{3}{4}$ th of the distance in $\frac{2}{3}$ rd time. What should be his speed to cover the remaining distance in the remaining time?
A. $16 \mathrm{~km} / \mathrm{hr}$

B. $8 \mathrm{~km} / \mathrm{hr}$

## C. $12 \mathrm{~km} / \mathrm{hr}$

## D. $14 \mathrm{~km} / \mathrm{hr}$

## Answer: C

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