**Q.1.**A car running at a speed of 140 km/hr reached its destination in 2 hours. If the car wants to reach at its destination in 1 hour, at what speed it needs to travel?

1. 300 km/hr
2. 280 km/hr
3. 250 km/hr
4. 240 km/hr

**Answer with Explanation:- (2)**

Speed= Distance/Time

Distance to be covered = Speed x Time= 140 \* 2 = 280 km

Time = 1 hour

Required Speed =280/1= 280 km/hr

**Q.2.** Samuel covers the distance from his home to his office at a speed of 25 km/hr and comes back at a speed of 4 km/hr. He completes the whole journey within 5 hours 48 minutes. Find out the distance from his home to office

1. 16
2. 18
3. 20
4. 22

**Answer with Explanation:- (3)**

Let the speed of travelling to office and back to home be x and y respectively.

So, his average speed is = 2xy / (x+y) = (2 × 25 × 4) / (25 + 4) = 200/29 km/hr

He covers the whole journey in 5 hours 48 minutes = 5⅘ = 29/5 hrs

Therefore, total distance covered = (200/29 × 29/5) = 40 km

So, the distance from his home to office = 40/2 = 20 km

**Q.3.**A train 150 m long is running with a speed of 54 km per hour. In what time will it pass a telegraph post?

1. 8 sec
2. 7 sec
3. 10 sec
4. 11 sec

**Answer with Explanation:- (3)**

We know from the formula Time = Distance/ Speed

Thus, Time = 150/ 54 \* 5/18

or, Time = 10 sec

**Q.4.**A cyclist moving at a speed of 20 km/hr crosses a bridge in 2 minutes. What is the length of the bridge?

1. 555.5 m
2. 444.4 m
3. 777.7 m
4. 666.6 m

**Answer with Explanation:- (4)**

The length of the bridge is equal to the distance covered by the cyclist at a speed of 20 km/hr in 2 minutes.

So, Distance = Speed \* Time

Speed = 20 km/hr

Speed in m/s = 20 \*(5/18)=100/18→50/9 m/s

Time= 2 minutes →2 \* 60 = 120 seconds

Required distance =(50/9)\* 120=6000/9= 666.6 meters

**Q.5.**A policeman sees a thief at a distance of 100 meters and starts to chase him. The thief sees him and starts to run too. If the thief is running at the speed of 8 km/hr and the policeman is running at the speed of 10 km/hr, find out the distance covered by the thief before the policeman catches him.

1. 400
2. 450
3. 350
4. 470

**Answer with Explanation:- (1)**

Speed of policeman w.r.t thief = (10 - 8) = 2 km/hr.

Time taken by policeman to cover the 100 m distance between him and the thief = (100/1000) / 2 = 1/20 hr.

Therefore, the distance covered by thief in 1/20 hrs = 8 × 1/20 = 2/5 km = 400 meters.

**Q.6.** Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively . If they cross each other in 23 seconds, what is the ratio of their speeds?

1. 1:3
2. 3:2
3. 4:5
4. 1:4

**Answer with Explanation:- (2)**

Let the speed of trains be x and y   
length of train 1 = 27x  
length of train 2 = 17y  
Relative Speed= x+ y  
Time taken to cross each other = 23s  
(27x + 17y)/(x + y) = 23  
(27x + 17y) = 23(x + y)  
4x = 6y  
x/y = 3/2

**Q.7.**The ratio of the speed of two trains is 7:8. If the second train covers 400 km in 4 h, find out the speed of the first train.

1. 69.4
2. 72.5
3. 89.5
4. 87.5

**Answer with Explanation:- (4)**

Let the speed of the two trains be 7x and 8x.

Then, 8x = 400 / 4 = 8x = 100 ⇒ x = 12.5 km/h.

 Hence, speed of the first train = 7x = 7 × 12.5 = 87.5 km/h

**Q.8.** A train starts from Delhi at 6.00 a.m. and reaches Meerut at 10 a.m. The other train starts from Meerut at 8 a.m. and reaches Delhi at 11.30 a.m. If the distance between Delhi and Meerut is 200 km, then at what time did the two trains meet each other?

1. 8:00 am
2. 8:36 am
3. 8:56 am
4. 7:46 am

**Answer with Explanation:- (3)**

Speed of the train starting from Delhi = 200/4 = 50 km/h

Speed of train starting from Meerut = 200/3.5 = 400/7 km/h

Suppose the two trains meet x hours after 6.00 am

Then x X 50 + (x - 2) x 400/7 = 200

or, 350x + 400x - 800 = 1400

or, 750x = 2200

or, x = 2200/750 = 2h 56 min

Hence, the required time = 8.56 am

**Q.9.** A train does a journey without stopping in 8 hours. If it had traveled 5 km an hour faster, it would have done the journey in 6 hours 40 min. What is its slower speed?

1. 25
2. 35
3. 40
4. 30

**Answer with Explanation:- (1)**

Let its slower speed = V km per hour

Here distance is same in both the cases

Using the formula = V1 x t1 = V2 x t2

or, V x 8 = (V + 5) x 20/3

or, 24V = (V + 5) x 20

V= 25 km/h

**Q.10.** Including stoppages the speed of a bus is 60 km/hr and excluding stoppages its speed is 65 km/hr. For how long the bus stops in an hour?

1. 6 minutes
2. 7 minutes
3. 3 minutes
4. 4 minutes

**Answer with Explanation:- (4)**

The bus covers a distance of 60 km in an hour if it stops at the bus stops and the bus covers a distance of 65 km in an hour if it does not stop at the bus stops, due to stoppages it covers 5 km less. If it does not stop it will cover 5 km more.

Time taken to cover 5 km = Distance/Speed

Time =5/65→1/15hour

We need answer in minutes so (1/15)\* 60=4 minutes

11.Express a speed of 36 kmph in meters per second?

a. 10mps

b. 12 mps

c. 14 mps

d. 17 mps

12. Express 25 mps in kmph?

a.15kmph

b.99 kmph

c. 90 kmph

d. None

13. The speed of a train is 90 kmph. What is the distance covered by it in 10minutes?

a. 15kmph

b. 12kmph

c. 10kmph

d. 5 kmph

14. 4. A car covers a distance of 624 km in 6 ½ hours. Find its speed?

A. 104 kmph

B. 140 kmph

C. 104 mph

D. 10.4 kmph

Answer: Option A

15. 5. A and B complete a work in 6 days. A alone can do it in 10 days. If both together can do the work in how many days?

A. 3.75 days

B. 4 days

C. 5 days

D. 6 days

Answer: Option A

16. A can do a piece of work in 4 days. B can do it in 5 days. With the assistanceof C they completed the work in 2 days. Find in how many days can C alone doit?

A. 10 days

B. 20 days

C. 5 days

D. 4 days

Answer: Option B

17. A, B and C can do a piece of work in 24, 30 and 40 days respectively. They start the work together but C leaves 4 days before the completion of the work. In how many days is the work done?

A. 15 days

B. 14 days

C. 13 days

D. 11 days

Answer: Option D

18. 5 men and 12 boys finish a piece of work in 4 days, 7 men and 6 boys do it in 5 days. The ratio between the efficiencies of a man and boy is?

A. 1:2

B. 2:1

C. 2:3

D. 6:5

Answer: Option D

19. A and B can finish a work in 16 b days while A alone can do the same work in 24 days .In How many days B alone will complete work in ?

a. 3 days

b. 4 days

c. 6 days

d. 12 days

Answer: Option A

20. What number has a 5:1 ratio to the number 10?

A. 42

B. 50

C. 55

D. 62

Answer: Option B

21. Two same glasses are respectively 1/4th 1/5th full of milk. They are then filled with water and the contents mixed in a tumbler. The ratio of milk and water in the tumbler is?

A. 3:8

B. 9:31

C. 8:21

D. 10:27

Answer: Option B

22. A and B entered into a partnership investing Rs.25000 and Rs.30000 respectively. After 4 months C also joined the business with an investment of Rs.35000. What is the share of C in an annual profit of Rs.47000?

A.Rs.18000

B. Rs.15000

C. Rs.17000

D. Rs.14000

Answer: Option D

23. . In how many years does a sum of Rs. 5000 yield a simple interest of Rs. 16500 at 15% p.a.? A. 22

B. 24

C. 25

D. 23

Answer: Option A

24. The radius of a circle is increased by 1%. Find how much % does itsarea increases?

A. 1.01%

B. 5.01%

C. 3.01%

D. 2.01%

Answer: Option D