AILET

Maths: Speed, Time And Distance: Practice Questions

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1. Aman leaves Chandigarh at 8 am and drives to Delhi at a constant speed of 50 km/hr. Two hours later Sanjit leaves Chandigarh and follows the same route to Delhi. Both of them reach Delhi by 3 pm. At what speed Sanjit is driving and what is the distance from Chandigarh to Delhi?
2. On Friday, Ajay walks 3/4th of his usual speed and reaches office late by 16 mins than his usual time. How long does Ajay usually take to travel from home to office?
3. Ram and Shyam are 81 km apart, start travelling towards each other at the same time. If Ram covers 5 km per hour and Shyam covers 4 km per hour, when would they meet? How far would have Shyam travelled when they meet?
4. A plane covers a certain distance at a speed of 240 km/hr in 5 hrs. To cover the same distance in hrs, what should be the speed of the train.
5. A train travels 50% faster than a car. Both start from point Mumbai at the same time and reached point Bombay 75 km away from Mumbai at the same time. On the way, however, the train lost about 12.5 mins while stopping at stations. What is the speed of the car?

Answers and Solutions :

1. Speed of Sanjit= 70 km/hr and distance between Chandigarh to Delhi = 350 km

Sol: Distance travelled by Aman = Distance travelled by Sanjit

Let the speed of Sanjit be s km/hr

50*7 = s * 5

S= 70, Speed of Sanjit is 70 km/hr

Distance Between Chandigarh and Delhi = s*time = 70*5= 350 km

2. 48 minutes.

Sol: Let s be the usual speed of Ajay and suppose he usually takes t minutes to travel from home to office, thus distance would be st m/min.

On Friday, speed was 3/4th hence speed becomes 3⁄4s and that made Ajay late by 16 minutes so time becomes t+16 mins. Therefore, d= ¾ s*(t+16). As the distance in both the situation remained the same we can equate them.

st= (3 / 4) s * (t+16), Solving the equation gives the value 48 mins.

3. 9 hrs, 36 km

Sol: Since Ram and Shyam are travelling in the opposite direction their relative speed would be sum of their speeds i.e., 5+4 km/hr = 9km/hr. Distance between them is 8 km hence the time when they meet is distance/speed = 81/9 = 9hr.

Distance traveled by Shyam = Speed * Time = 4*9 = 36 km

4. 720 km/hr

Sol: Distance traveled= 240*5= 1200 km

Speed required = Distance/ Time = 1200/ = 1200/ (5/3) = 720 km/hr

5. 120 km/hr

Sol: Let speed of car be s km/hr,

Then speed of train = (150/100) * s = 1.5 s

Therefore, 75/s – 75/1.5s = 125/600

75/s – 50/s = 5/24

s = 24*25/5 =120 km/hr

By

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