SPEED,TIME & DISTANCE

challenges:

1. There are two places X and Y ,200 km apart from each other. Initially two persons P and Q both are at ‘X ’. The speed of P is 20 km/h and speed of Q is 30 km/h. Later on they starts to move to and fro between X and Y . If they start to move between X and Y, then for the first time when they will meet each other ?
   Ans: After 8 hours

2. A person goes to his office at 1/3rd of the speed at which he returns from his office. If the average speed during the whole trip (i. e. , one round) is 12 km/h. What is the speed of the person while he was going to his office ?
   Ans: 8 km/hr

3. The speed of a car during the second hour of its journey is thrice that in the first hour. Also its third hours speed is the average speed of the first two hours. Had the car travelled at the second hours speed during all the first three hours, then it would have travelled 150 km more. Find the percentage reduction in time in the second case for the first three hours :

   Ans: 33 1/3 %

4. In a circus there was a leopard and a tiger walking in the two different rings of same radii. There I observed that when leopard moved 3 steps, tiger moved 5 steps in the same time, but the distance traversed by leopard in 5 steps is equal to the distance traversed by tiger in 4 steps. What is the number of rounds that a leopard made when tiger completed 100 rounds ?

Ans: 48 rounds

5. Speed of a boat in still water is 300% more than the speed of current. The boat takes a total time of 8 hours to cover a distance of 45 km upstream and 45 km in downstream both. Find speed of current .

Ans: 3km/hr

6. A man reaches his office 30 min late, if he walks from his home at 3 km per hour and reaches 40 min early if he walks at 4 km per hour. How far is his office from his house?

Ans: 14 km

7. Raju, walking at the rate of 6 kmph, covers a certain distance in three hours. In how much time will Raju cover

this distance running at the speed of 18 kmph?

Ans: 1hr

8. Two trains 121 m and 99 m in length respectively are running in opposite directions, one at the rate of 40 kmph and the other at the rate of 32 kmph. How long will they take to be completely clear of each other from the moment they meet?

Ans: 11 sec