(10) A and B are 2 station 390 km apart. A train starts from A at 10 a.m and travels towards B at 65 km ph. Another train starts from B at 11 a.m and travels towards A at 35 Kmph. At what time do they meet?

soln:- Suppose they meet x after 10 a.m, then.

(Distance moved by first in x hrs) + (Distance moved by second in $(x-1)$ hrs) = 390

$65x + 35(x-1) = 390 \Rightarrow 100x = 425$

$\Rightarrow x = 4\frac{1}{4}$. so they meet 4 hrs 15 min after 10 am ie, at 2.15 a.m.

(11) A good train leaves a station at a certain time and at a fixed speed. After 6 hours, an express train leaves the same station and moves in the same direction at a uniform speed of 90 km ph. This train catches up the goods train in 4 hours. find the speed of the good train.

soln:- Let the speed of the good train be x Kmph

Distance covered by goods train in 10 hrs

= Distance covered by express train in 4 hrs

$\therefore 10x = 4 \times 90$ or $x = 36$

So, speed of goods train = 36 Kmph.