Answer on Question#50278 - <Math> - <Algebra >

A car leaves Melbourne at 8 a.m travelling at a constant speed of 80 km/hr.it is followed at 10 a.m by another car travelling at constant speed of 110 km/hr on the same road. At what time will the second car overtake the first ?

Solution. For two hours the first car drove off from Melbourne on the $2hr \cdot 80km/hr = 160km$. So, when the second car has started traveling the distance between cars was 160 km. Since the subtraction of the cars speed is $110km/hr - 80km/hr = 30km/hr$ then second car will overtake the first after: $\frac{160km}{30km/hr} = \frac{16}{3}hr = 5\frac{1}{3}hr$. Thus, 10 a.m. plus 5 hours and 20 minutes is 3p.m.20min

Answer: The second car will overtake the first at 3 p.m.20min