Uniform Motion

1.   Two men Abe and Bob start from places 35 miles apart and walk toward each other at a rate of 4 miles and 3 miles per hour respectively. How many hours will it be before they meet?

2.   Two men Carl and Denis start from places 42 miles apart and walk toward each other at a rate of 4miles and 3 miles an hour respectively, In how many hours will they meet?

3.   Two men Ed and Frank from places in New York and Philadelphia 112 miles apart ride their bicycles toward each other at rates of 8 and 12 miles per hour respectively. If Frank leaves at 10 am and E leaves an hour later, at what time will they meet?

4.   Two boys start at the same place and travel in opposite directions on bikes at a rate of 10 and 12 miles per hour, in how long before they will be 108 miles apart?

5.   Two boys start at the same place and travel in the same direction at rates of 10 and 12 miles per hour. In how long before they will be 16 miles apart?

6.   Ted leaves his home at 7 am heading to New York City at 50 mph. At 8 am, his brother realizes Ted forgot his briefcase and goes after him at a rate of 70 mph, In how many hours will it take his brother to catch Ted? At what time will he catch him?

7.   A train is traveling 30 miles per hour. A car starts out from the same place 2 hours later and overtakes the train in 3 hours. How fast was the car going?

8.   Bill starts out in his auto traveling 30 miles per hour. Four hours later Juan starts out from the same point at 60 miles per hour to overtake Bill. In how many hours will it take to catch him?

9.   Bill starts out in his auto traveling 30 miles per hour. Four hours later Juan starts out from the same point at 60 miles per hour to overtake Bill. If Bill stops for an hour to fix a flat, in how many hours will it take to catch him?

10.   John drives to his friend's house travelling 60 miles per hour. After his visit, he returns home at a rate of 40 miles per hour. He stays at his friend's house two hours, if he is gone 7 hours, what was the distance to his friend's house?