

Age & Rate Worksheet

Do the following problems using *presentation form*.

Note: For rate problems, use the physics rule: $\text{Distance} = \text{Rate} \times \text{Time}$.

1. Right now, I am four times as old as my sister. In six years, I will be twice as old as my sister. What are the present ages of my sister and myself?
2. Jaques and Emilia have a combined age of 23 years. Seventeen years earlier, Jaques was twice as old as Emilia was. How old are each of them now?
3. Two runners start a race at the same time. Runner #1 runs thirty meters per minute faster than Runner #2? How long will it take for Runner #1 to get a 100 meter lead on Runner #2?
4. Ann starts her morning walk on the exercise path at the local park walking at a steady speed of 120 feet per minute. Jo starts her morning jog five minutes later, running at a steady 180 feet per minute. Jo starts from the same point, going in the same direction as Ann, but her rate is 150 feet per minute. How long will it take Jo to catch up with Ann.
5. Terry is twice as old as Barbara. Drew is three years older than Barbara. In seven years, their combined ages will then be exactly seven times as old as Barbara is now. How old is each of them now?
6. Esther and Stefan are hiking in opposite directions, starting eleven in the morning. If Esther is moving at 10 inches per second and Stefan is moving at 14 inches per second, by what time will the two hikers have hiked a total of 840 feet?
7. Karen was heading for the airport to catch a plane to Chicago where she was to perform a concert using her prized violin. She was in a hurry and forgot to place the violin in the trunk of the car. Their house was on the main road. Karen was a cautious driver and drove, as usual, at a steady 45 miles per hour. Twelve minutes after Karen left, Michael noticed the violin. This was in the olden days before cellphones. Michael raced out to the his car with the violin and started to try to catch up with Karen. By then, fifteen minutes had elapsed from the time Karen had left. If Karen were to get more than forty miles away, the traffic will be too congested for Michael to find or get to her. What is the minimum speed Michael had to drive to reach her in time? [Based on a real-life problem].
8. When Susan was twenty years old when her brother was four years old. In how many more years would she be twice as old as her brother?
9. Lidia powered a motorboat at 20 nautical miles per hour up-river from Litton to Mapleville, a distance of 15 miles. She stopped over in Mapleville for an hour, then headed back to Litton. The whole roundtrip, including the stopover, took two hours and thirty-six minutes. Assume that the river flows at a constant speed. How fast was the river flowing?
10. Steve is five times as old as his brother was three years ago. In nine more years, Steve's brother will be twice as old as Steve was three years ago. How old are each of them today?