

## Assignment #17: Review of Linear Problems

### Problems

1. Lauren invested \$9000, part at 6% and part at 9%. In one year, the interest earned was equivalent to investing the whole \$9000 at 7%. How much of the interest earned was due to the 9% investment?
2. Nikki runs 15 mph slower on Thursdays than on Fridays. It took her 7 hours to get from home to school on Friday, but 10 hours on Thursday. How far is the school from her home?
3. Clare runs away at 14 mph. Six hours later, Sara chases her at 26 mph. How long does Sara take to catch Clare?
4. Two trains of the same length and speed start out 6 train lengths apart. They travel toward each other for 20 minutes, then crash. At the moment they hit, the ends of the trains are 16 miles apart. How fast was each train going? (*Hint: if their ends are 16 miles apart when they crash, how long are these trains? Based on that, how much distance does each cover in 20 minutes?*)

(Optional): In 1941, Ted Williams hit .400 . (In other words, he got a hit 4 times out of 10, on the average. We therefore judge his probability of getting a hit in any time at bat to be  $\frac{4}{10}$  .) If he came to bat 4 times in a game, what is the probability that he would get at least one hit? (*Hint: what is his probability of not getting a hit in any time at bat?*)