Section 1.3 (Determining Principal, Interest Rates, and Time)

1. Mr. Belding is retiring and wants to be able to generate $1500 income a month from an investment that earns 5% simple interest. How much money does he need in the account to achieve his goal?

2. Students in a club want to raise money for a scholarship. They plan to deposit money in a bank account that pays 10% simple interest. They need to generate $500 twice a year for the scholarship. How much money do they need in the account?

3. Zach borrowed $200 from A.C for 90 days, and repaid him $205. Find the simple interest rate of this loan.

4. Screech has saved up $3000, he would like to earn $200 in interest so he can buy a $3,200 used car. He found a savings account that pays 7.3% simple interest. How long does he need to leave the money in the account to earn the desired interest?

5. For each of the following examples, indicate if you are trying to find interest, principal, rate, or time. (And you should be able to answer any/all of these questions now)

   (a) Tori has $1,050 to deposit into a savings account. She’s hoping to find a savings account that will earn her $20 in interest every 3 months. What simple interest rate does she need on the savings account to make her goal?

   (b) Mrs. Bliss found a savings account with a simple interest rate of 1.2%, she would like to earn $100 every 4 months from this account. How much money does she need to deposit into the account to earn the desired interest?

   (c) To encourage saving, Zach’s parents offer to give him 15% simple interest on any money he ‘saves’ with them. If he has $300 now, how long will it take for his ‘savings’ to grow to $350?

   (d) Lisa has $20,000 in a savings account with a simple interest rate of 2.7%. How much interest will she have earned after 121 days?