Ten *Sapling* multiple-choice questions. You have unlimited attempts to complete the assignment and they are due at midnight on the date above.

The written questions below are due at the beginning of class and should be typed.

1. Chapter 4. Problems and Applications #2.

    <u>**Solution.**</u>
    a) **When the Fed buys bonds, the dollars that it pays to the public for the bonds increase the monetary base, and this in turn increases the money supply. The money multiplier is not affected, assuming no change in the reserve-deposit ratio or the currency-deposit ratio.**

    b) **When the Fed increases the interest rate, it pays banks to hold reserves. This gives banks an incentive to hold more reserves relative to deposits. The increase in the reserve-deposit ratio will decrease the money multiplier. The decline in the money multiplier will lead to a decrease in the money supply. Since banks are holding more reserves (because they are making fewer loans), the monetary base will increase.**

    c) **If the Fed reduces its lending to banks through the Term Auction Facility, then the monetary base will decrease, and this in turn will decreases the money supply. The money multiplier is not affected, assuming no change in the reserve-deposit ratio or the currency-deposit ratio.**

    d) **If consumers lose confidence in ATMs and prefer to hold more cash, then the currency-deposit ratio will increase, and this will reduce the money multiplier. The money supply will fall because banks have fewer reserves to lend. The monetary base will increase because people are holding more currency, but will decrease because banks are holding fewer reserves. The net effect on the monetary base is zero.**

    e) **If the Fed drops newly minted $100 bills from a helicopter, then this will increase the monetary base and the money supply. If any of the currency ends up in the bank, then there will be a further increase in the money supply. If people end up holding more currency relative to deposits, then the money multiplier would fall.**

2. Chapter 4. Problems and Applications #3.

   Solution.

   a) **If all money is held as currency, then the money supply is equal to the monetary base. The money supply will be $1,000.**

   b) **If all money is held as deposits, but banks hold 100 percent of deposits on reserve, then there are no loans. The money supply will be $1,000.**

   c) **If all money is held as deposits and banks hold 20 percent of deposits on reserve, then the reserve–deposit ratio is 0.20. The currency–deposit ratio is 0, and the money multiplier will be 1/0.2, or 5. The money supply will be $5,000.**

   d) **If people hold an equal amount of currency and deposits, then the currency–deposit ratio is 1. The reserve–deposit ratio is 0.2 and the money multiplier is $(1 + 1)/(1 + 0.2) = 1.67$. The money supply will be $1,666.67.**

   e) **The money supply is proportional to the monetary base and is given by $M = m \times B$, where M is the money supply, m is the money multiplier, and B is the monetary base. Since m is a constant number defined by the currency–deposit ratio and the reserve–deposit ratio, a 10-percent increase in the monetary base B will lead to a 10-percent increase in the money supply M.**