1) Recall that the formula for the money multiplier is:

\[ mm = \frac{C/D + 1}{C/D + rr} \]

a) The multiplier will be 4. The purchase of securities represents a $100 million increase in the monetary base, so M1 increases by $400 million.

b) If C/D falls to 0.05, the multiplier rises to 7. Therefore, the change in M1 would be $700 million.

2) Inflation acts as a tax on money holdings by lowering its purchasing power. A rise in expected inflation will cause money demand to drop. Prices need to rise.

<table>
<thead>
<tr>
<th>Real Interest Rate (r)</th>
<th>M/P</th>
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![Graph showing the relationship between Real Money (M/P) and Real Interest Rate (r)]
b) An open market sale will lower the supply of money. Prices fall.

3) With lower transaction costs, consumers can keep more money in the bank and carry lower cash balances. This should reduce the demand for money. The result would be higher prices.
4) The importance here is to remember what happens to money demand.
   a) A one-time increase in the stock of money has no effect on money demand. The increase in money supply causes rise in prices.

   An increase in money supply causes rise in prices.

   b) An increase in the growth of money creates an increase in inflation expectations. Money demand falls due to higher inflation expectations, which creates a bigger increase in prices.
5) Suppose that the economy experiences a temporary rise in productivity.
   a) Explain the impact of this event in the capital market. What happens to the interest rate?

   The temporary increase in productivity increases savings (income temporarily increases) and investment (due to rising MPK). The effect on the interest rate is ambiguous. For concreteness here, let’s assume that the interest rate is unaffected.

   b) Explain the impact of this event on the money market. What happens to prices?

   Higher income raises money demand. To bring the interest rate in the money market back down to match the (unchanging) interest rate in the capital market, prices would have to fall.