1) Suppose that the Federal Reserve would like to lower the monetary base by $200M. The reserve requirement is currently 8% and the cash/deposits ratio is 90%.

a) What transaction would be required to lower the monetary base by $200M?

*The fed would have to conduct an open market sale of treasuries.*

b) Assuming that banks hold no excess reserves, calculate the money multiplier.

\[
mm = \frac{1 + \frac{C}{D}}{\frac{C}{R} + \frac{D}{D}} = \frac{1.90}{.98} = 2
\]

c) What impact would a $200M reduction in the monetary base have on the M1 money supply?

*A $200M reduction in the monetary base would lower M1 by $400*

d) Currently, the money multiplier is around .8 which is a bit unusual. What behavior by banks will cause the multiplier to be less than 1?

*For the multiplier to be less than one, R/D needs to be bigger than 1 (i.e. banks are holding a quantity if reserves greater than the amount of checking accounts outstanding).*