Consider the following Balance Sheets for the Banking System and the Fed. Assume that:

1. There are no unwanted excess reserves (ER=0).
2. There are no coins.
3. All reserves are held as deposits at the Fed (No Vault Cash)

Banking System

<table>
<thead>
<tr>
<th>A</th>
<th>L+NW</th>
<th>D</th>
<th>1000</th>
<th>SEC</th>
<th>700</th>
<th>FRN</th>
<th>600</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>RR</td>
<td>100</td>
<td>Loans from DL</td>
<td>100</td>
<td>Bank Deposits</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>ER*</td>
<td>100</td>
<td>FED</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L&amp;S</td>
<td>900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Determine:

1. The Money Supply _________________
2. The Monetary Base _________________
3. The Non-Borrowed Monetary Base _________________
4. $r_D$ _________________
5. currency ratio (c) _________________
6. excess reserve ratio (e) _________________
7. money multiplier
   $m=(1+c)/(r_D + e + c)$ _________________

How will the balance sheets change (when the banking system return to a no unwanted excess reserve position) if the Fed buys $100 of securities from the public?

Formulas:

\[
M = D + C \\
MB = R + C \\
m = (1+c)/(r_D + e + c) \\
M = m(MB + DL) \quad \text{or} \quad \Delta M = m(\Delta MB + \Delta DL) \\
M = M/MB \\
D = (1/(r_D + e + c)) MB \quad \Delta D = (1/(r_D + e + c) ) \Delta MB \\
RR = r_D D \quad \Delta RR = r_D \Delta D \\
C = c D \quad \Delta C = c \Delta D \\
E = ER*/D
\]