Supplementary. We know that the required reserve ratio \((r_d)\) is 10%. Assume that the banking system has an excess reserves equal to $4 billion. Further, the currency in circulation equals $450 billion, and the total amount of checkable deposits equals $900 billion. Based on these numbers, calculate

(a) required reserves held by the banking system
(b) total reserves held by the banking system,
(c) monetary base
(d) total money supply (M1)
(c) the money multiplier

Ans. (a) 
\[ RR = r_d * D = 0.1 * 900 = 90 \text{ billion} \]

(b) 
\[ R = RR + ER = 90 + 4 = 94 \text{ billion} \]

(c) 
\[ MB = C + R = 450 + 94 = 544 \text{ billion} \]

(d) 
\[ M1 = C + D = 450 + 900 = 1350 \text{ billion} \]

(c) 
\[ m = \frac{M1}{MB} = \frac{1350}{544} = 2.48 \]