Problem 1. In a country, labor force participation rate is 60 percent, the natural rate of unemployment is 5 percent, and the average labor productivity is 1200 units. Therefore, in this country the real GDP per capita equals _____ units.

Hint 1.

$$\frac{Y}{Pop} = \frac{Y}{L} \times \frac{L}{LF} \times \frac{LF}{Pop}.$$

Oh yeah, and assume that cyclical unemployment is zero.[1]

[1] Person who asked in discussion > me.

Problem 2. *True or False.* The difference between human capital and knowledge capital is that, human capital is rivalrous but not subject to diminishing returns. Knowledge capital, on the other hand, is non-rivalrous but subject to diminishing returns.

Hint 2. I dun' talked about this in discussion.

Problem 3. Comparing the growth performances of pairs of countries like capitalist South Korea and socialist North Korea, capitalist West Germany and socialist East Germany, capitalist Hong Kong and communist china, teaches us about the role of institutions in economic growth.

Hint 3. I dun' talked about this in discussion.

Problem 4. Here's some data from a country.

Currency	\$10,000.00
Demand deposits	\$20,000.00
Savings deposits	\$15,000.00
Short-term treasury bonds (maturity less than a year)	\$25,000.00
Long-term treasury bonds (maturity more than a year)	\$45,000.00
Money market mutual funds deposits owned by individuals	\$12,000.00
Money market mutual funds deposits owned by corporations	\$56,000.00
Small denomination time deposits (less than \$100,000)	\$28,000.00
Large denomination time deposits (more than \$100,000)	\$45,000.00
Corporate bonds	\$12,000.00
Corporate stocks	\$80,000.00

Find M1 and M2.

Hint 4. Use the figure with M1 and M2 from the book/discussion.

Problem 5.

(a) If Abe transfers \$100,000 from his savings account to his checking account, M1 will increase but M2 will remain the same. Do you agree or not?

(b) Susan has \$250,000 in a time deposit account. If she transfers \$50,000 from that account to her checking account, M1 will increase but M2 will remain the same. Do you agree or not?

(c) If Jack transfers \$40,000 from his checking account to his savings account, M1 will decrease but M2 will remain the same. Do you agree or not?

(d) If Carmen transfers \$20,000 from his savings account to his money market mutual fund account, both M1 and M2 will remain the same. Do you agree or not?

Hint 5. Use the figure with M1 and M2 from the book/discussion.

Problem 6. The bank sells $6 million worth of treasury bonds to the Fed. Which of the four options that follow the bank balance sheet is the correct balance sheet immediately following this sale (Before the bank loaning out that $6 million or buying treasury bonds with it)? (I can't fit all of those tables here. Sorry!)

Hint 6. The number of deposits hasn't changed, but the bank now has $6 million more than it had before in reserves.

Problem 7. Someone deposits $6 million in the bank. Which of the four options that follow the bank balance sheet is the correct balance sheet immediately following this transaction (Before the bank loaning out that $6 million or buying bonds)?

Hint 7. Find the reserve ratio. Then add the 6 million to deposits. What's the new required reserves? What's the new total reserves?

Problem 8. The required reserve ratio is 10%. If the Fed increases the amount of excess reserves in the banking system by \$100,000,000, the maximum potential amount of additional money created in the economy will be _____ dollars.

Hint 8. If fully loaned out, then the money multiplier is $\frac{1}{rrr}$.

Problem 9. The required reserve ratio is 10%, but banks want to hold an additional 2.5% of their deposits as excess reserves. If the Fed increases the amount of excess reserves in the banking system by \$100,000,000, the maximum potential amount of additional money created in the economy will be _____ dollars.

Hint 9. The money multiplier depends on the fraction of deposits that are actually loaned out. If the banks hold 2.5% excess reserves, then the money multiplier is $\frac{1}{rrr + 0.025}$.

Problem 10. Currently the required reserve ratio is 10% and there are \$100,000,000 of deposits in the banking system. If the Fed reduces the required reserve ratio to 8%, the maximum potential amount of additional loans created in the economy will be _____ dollars.

Hint 10. What did required reserves used to be? Now what are required reserves? So then how much excess reserves do they have after the rrr drops? Once they start lending out that excess, what does that imply via the money multiplier?