Assumptions are critical in macroeconomics. Different assumptions change dramatically your answers. Assume the following conditions for the following questions:

- Closed economy (NX=0)
- Prices are fixed (inflation=0)
- Interest rates are VARIABLE
- Planned investment is DEPENDENT on interest rates
- Consumption is independent of interest rates
- Y refers to real GDP (not nominal)

Please use the following relationships and data to answer the questions. If the question asks you to calculate, then make sure you have a number as an answer.

\[ C = 40 + .95Y_d \]
\[ I \text{ (planned)} = 100 - 10r \]
\[ G = 69.5 \]
\[ T = 10 \]
\[ NX = 0 \]
\[ r_1 = 10\% \]

1. Calculate the equilibrium Y. Label \( Y_1 \).
2. Sketch the Keynesian-cross for this economy. Label the equilibrium output, $Y_1$. 
3. Suppose full-employment output \((Y_f)\) is at $10,000. Suppose the government raises government spending to get the economy from \(Y_1\) to \(Y_f\). How much should the government increase its spending? Ignore the money market effects.
4. The money market matters. Show the effects of the fiscal policy on the money market graph. Label $r_1$ as your original equilibrium interest rate before the fiscal policy. Label $r_2$ as your new interest rate after the fiscal policy. What happens to interest rates?
5. Show the fiscal policy and money market effects on the Keynesian-cross. Label your new output, $Y_2$. Ignore the feedback effects.
6. Approximate (using an inequality like A<B<C) where your final equilibrium output \( Y_n \) will be after all the feedback effects to the output and money markets. A number is not necessary.
Please use the following relationships and data to answer the questions. If the question asks you to calculate, then make sure you have a number as an answer.

\[ C = 40 + 0.95Y_d \]
\[ I \text{ (planned)} = 100 - 10r \]
\[ G = $69.5 \]
\[ T = $20 \]
\[ NX = $0 \]
\[ r_a = 5\% \]

7. Calculate the equilibrium Y. Label \( Y_a \).
8. Sketch the Keynesian-cross for this economy. Label $Y_a$. 
9. Suppose full-employment output ($Y_f$) is at $3,900. Suppose the Fed buys government securities to get the economy from $Y_1$ to $Y_f$. Sketch the money market graph. Label your initial equilibrium interest rate, $r_a$. Label your new equilibrium interest rate, $r_b$. Ignore the output market effects.
10. The output market matters. Show the effects of the monetary policy on the output market graph. Label $Y_a$ as your original equilibrium output before the monetary policy. Label $Y_b$ as your new output after the monetary policy. What happens to output?
11. The output market affects the money market. Show the output market effects on the money market. Label $r_a$ and $r_b$. Label your new interest rate, $r_c$. Ignore the feedback effects.
12. Approximate (using an inequality like $A < B < C$) where your final equilibrium interest rate ($r_n$) will be after all the feedback effects to the output and money markets. You do not need to calculate a number.