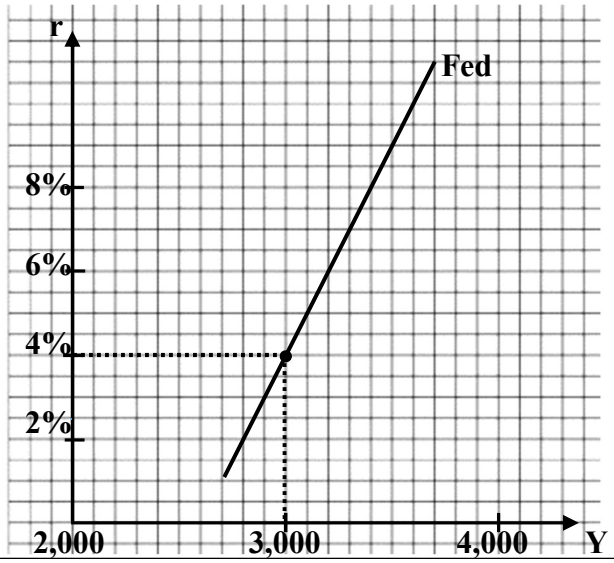
r=4%, Y=3,000

1. The graph below shows the Fed rule curve and the current equilibrium of an economy in which
   - P is fixed
   - MPC=80% => 1/MPS=5
   - planned investment increases $40 whenever interest rate decreases 1% I increases $1 => Y increases $5



(a) Draw the IS curve in the graph above.

(b) If government spending G increases $120, G increases $1 => IS curve shifts $5

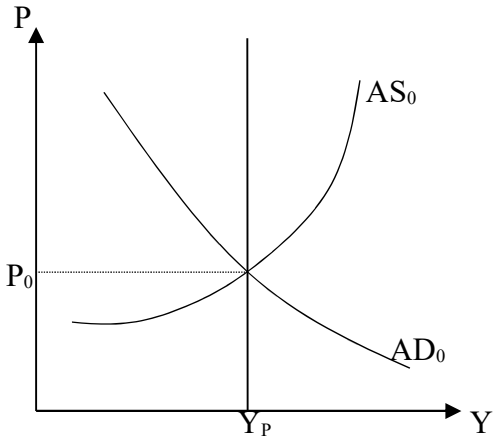
(i) Draw the new IS curve in the graph above.

(ii) What are the interest rate and output at the new equilibrium? Where the new IS curve intersects the Fed rule curve

(iii) What are the changes in planned investment and changes in output from the current equilibrium to the new equilibrium?

(c) What is the government spending multiplier? If interest rate does not rise, the G multiplier is 5. The crowding out effect makes it smaller than 5.

2. The graph below shows the current equilibrium in an economy (Y_P: potential output).



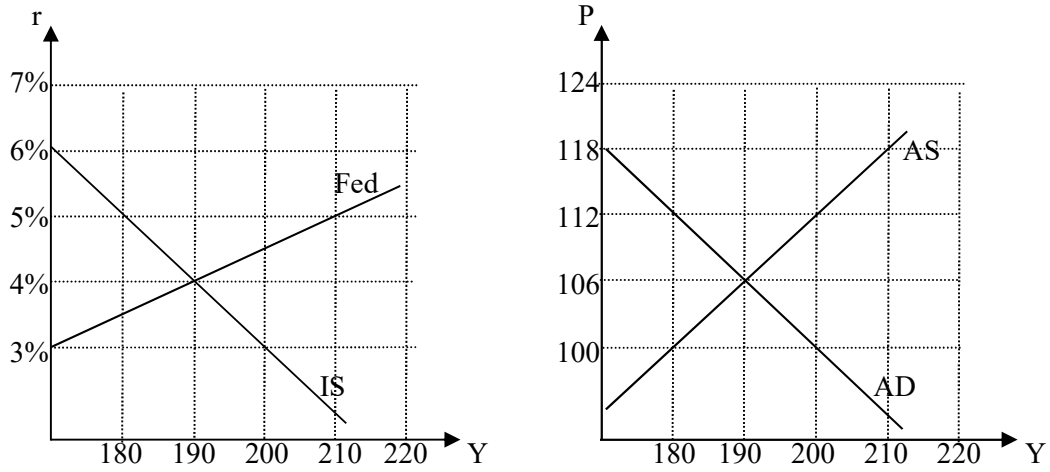
If autonomous consumption increases,

(a) Show the SR and LR changes in the graph above. refer to Figure 11.9 in the lecture notes

(b) What are the changes in output and price level from the current equilibrium to the new short-run equilibrium ?

(c) What are the changes in output and price level from the current equilibrium to the new long-run equilibrium ?

3. The IS/Fed rule diagram and AS/AD diagram below show the current equilibrium in an economy.



Let the potential output be 200.

(a) What are the current output, interest rate, and price level?

(b) What will be the output, interest rate, and price level in the long run?

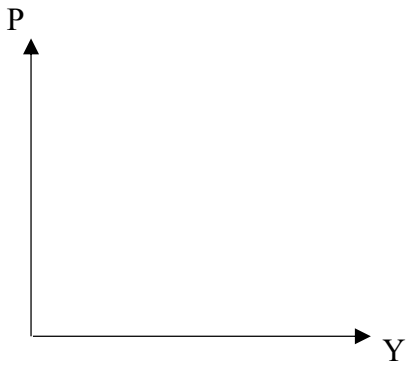
Fed rule curve and AS curve will shift until the intersection points are at the potential output.

(c) What will be the output, interest rate, and price level in the long run if the government use fiscal policy to immediately push the economy to full employment?

Expansionary fiscal policy shifts the AD curve now to make it intersects the AS curve at potential output. This requires a shift of AD curve by $20, i.e. output increases $20 before price level rises. That means the IS curve in the first graph should shift to the right until it intersects the Fed rule curve at an output value $20 more than the original equilibrium. Then price level increase shifts the Fed rule curve until the potential output is arrived.

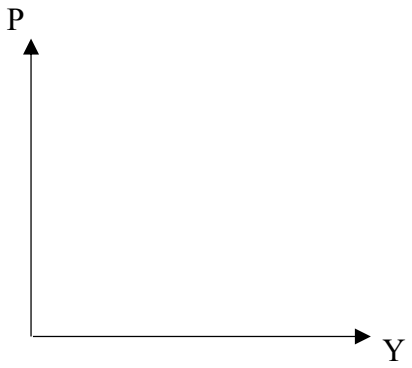
At the current equilibrium AS curve is flat

4. (a) An economy is currently far below capacity. Show the short-run changes in the AS/AD graph below and predict the changes in the price level and aggregate output if firms increase capital investment.



(b) An economy is currently near capacity. Show the short-run changes in the AS/AD graph below and predict the changes in the price level and aggregate output if the central bank raises the required reserve ratio.

At the current equilibrium AS curve is steep



(c) Show the short-run changes in the AS/AD graph below and predict the changes in the price level and aggregate output if energy price increases in the world market and the central bank tries to limit the rise of the price level.

AS curve shifts

AD curve shifts so that there will be not much rise in P