

# ANNOTATED KEY

Economics 102  
Additional Practice Questions  
Summer 2014

1. Holding everything else constant, in the simple Keynesian Model presented in class, when aggregate expenditure is greater than production, this reduces the level of inventories and in the short-run results in an increase in the aggregate price level.

- a. True  
b. False

*In simple model Keynesian prices held constant*

2. Which of the following statements best describes the differences between the Classical and Keynesian models presented in class?

- a. When the economy is in the midst of an economic recession, the Keynesian economist typically will advocate governmental intervention while the Classical economist will advocate patience.  
b. According to the Classical Model, economic fluctuations are due to a disequilibrium in the labor market; in the simple Keynesian Model, when aggregate expenditure is greater than actual production, prices rise to eliminate this disequilibrium.

*activist policy*

*Keynes' "In the long run we are all dead."*

3. Deliberate actions by policy makers that cause fiscal policy to be expansionary when the economy contracts are called automatic stabilizers.

- a. True  
b. False

*Deliberate actions are not automatic stabilizers, they are discretionary fiscal policy*

4. Consider an economy using the Keynesian model as presented in class. The value of the autonomous expenditure multiplier  $[1/(1-b)]$  in this economy is 2. If government spending increases by \$50 while taxes simultaneously increase by \$50, what will happen to the equilibrium level of GDP?

- a. It will not effectively change the level of output since the increase in government spending which stimulates spending is exactly offset by the increase in taxes which contracts spending. ~~X~~  
b. It will cause the equilibrium level of GDP to increase by less than \$50 because of the multiplier effect. ~~K~~  
c. It will cause the equilibrium level of GDP to increase by more than \$50 because of the multiplier effect. ~~X~~  
d. It will cause the equilibrium level of GDP to increase by exactly \$50 due to the multiplier effect.

*Very Hard*

Use the Loanable Funds Model to answer the next two questions:

$$\frac{1}{1-b} = 2 \Rightarrow 1 = 2 - 2b$$

$$2b = 1$$

$$b = \frac{1}{2} = .5 = MPC$$

$$Y = C + S_p + T - TR$$

$$S_G = T - TR - G$$

$$NS = S_p + S_G$$

$$NS = Y - C - G$$

$$KI = M - X$$

$$Y = C + I + G + (X - M)$$

In equilibrium, leakages = injections

$$\frac{-b}{1-b} = -1$$

$$\therefore \Delta Y = \left(\frac{1}{1-b}\right) \Delta G + \left(\frac{-b}{1-b}\right) \Delta T$$

$$\Delta Y = 2 \Delta G - \Delta T = 100 - 50 = 50$$

Furthermore, suppose the government runs a balanced budget (that is,  $G - T + TR = 0$ ) and collects \$300 in tax revenue. Firms spend \$55 on new capital and capital inflow equals \$15. Income equals \$450 and \$220 of that income is spent on consumption. Furthermore, leakages equal injections in this economy.

5. What is the level of private saving in this economy?

- a. \$55 since private saving must equal investment in order for the loanable funds market to be in equilibrium.  
b. \$70 since businesses are spending \$55 of their own money plus \$15 provided via the foreign sector (i.e., the capital inflow).

$$T = 300$$

$$I = 55$$

$$KI = 15 = M - X$$

$$\text{Income} = Y = 450$$

$$C = 220$$

*Leakages = Injection*

$$(T - TR) + S_p + M = G + I + X$$

$$S_p + M - X = G - (T - TR) + I$$

$$S_p + 15 = 55$$

$$S_p = 40$$

$$Y = C + S_p + (T - TR)$$

$$450 = 220 + S_p + 300 - TR$$

$$230 = S_p + 300 - TR$$

$$TR = S_p + 70$$

$$TR = 40 + 70 = 110$$

c. \$40 since businesses are demanding \$55 worth of loanable funds and the foreign sector is supplying only \$15 worth of loanable funds.

d. \$25 since the total demand for loanable funds is \$40 and there are \$15 of loanable funds being supplied through the capital inflow.

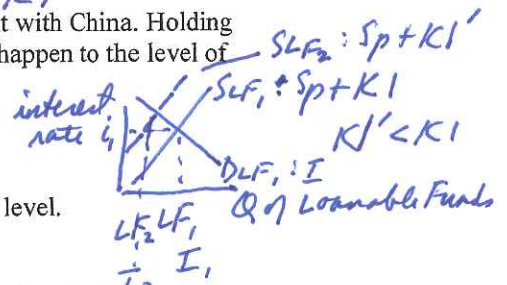
6. What is the level of government transfers in this economy?

- a. \$0
- b. \$90
- c. \$110
- d. \$125

7. According to the Loanable Funds Model, which of the following will most likely contribute to long-run growth?

- a. An increase in payments to the unemployed. *\* - a generous safety net may slow growth since people may be slower to take jobs*
- b. Increased restrictions on immigration. *\* - labor will grow at slower rate*
- c. Improved birth control methods. *\* - lower population: slower growth of labor force*
- d. A reduction in the capital gains tax. *\* - greater incentives to expand business  $\Rightarrow$  engage in investment spending  $\Rightarrow$   $K \uparrow$*

8. Answer this question according to the Classical Model. The US runs a trade deficit with China. Holding everything else constant, if the US narrows this gap by increasing exports, what will happen to the level of investment in the United States?



- a. Investment in the U.S. will increase relative to its initial level.
- b. Investment in the U.S. will decrease relative to its initial level.
- c. Investment in the U.S. could either increase or decrease relative to its initial level.
- d. There will be no effect on investment in the U.S.

9. The full employment level of output in an economy refers to the level of output produced when:

- a. Everyone above age 16 is working. *\* Not everyone 16 & older will choose to be in labor force*
- b. Everyone above age 16 who wants a job is working. *\* Still have frictional & structural unemployment*
- c. There is no unemployment due to the business cycle. *\*  $\Rightarrow$  No cyclical unemployment*
- d. There is no cyclical or structural unemployment. *\*  $\Rightarrow$  at full employment level of output there is frictional and structural unemployment*

Very hard

Use the following information for the next **two** problems.

Consider a closed economy whose price levels in 2004 and 2005 are the same. The GDPs in 2004 and 2005 are \$4,000 and \$5,000, respectively. Household consumption was \$3,000 and private saving was \$500 in 2004. In 2005, the government deficit increased by \$500. Private saving was \$1,500 in 2005. Analyze this economy using the Classical model given below:

$$Y = C + S_p + T - TR$$

$$S_G = T - TR - G$$

$$Y = C + I + G$$

$$NS = S_p + S_G$$

$$NS = Y - C - G$$

In equilibrium, leakages = injections

Year	Y or GDP	C	Sp	Govt DEF. G - (T - TR)	(T - TR)
2004	4000	3000	500		500
2005	5000		1500	↑ 500	

10. The increase in private investment in 2005 is:

- a. \$500
- b. \$1,000
- c. \$1,500
- d. \$2,000

⑦ If  $G = 1000 \Rightarrow S_G'$  in 2005 =  $-1000$   
 $\Rightarrow NS' = 1500 + (-1000) = 500 \Rightarrow$   
 $I' = 500$   
 $\Delta I = I' - I$  when  $G = 1000$  in  
 2004 and 2005  $\Rightarrow \Delta I = I' - I$   
 $= 500 - 0 = 500$  ANSWER: A

① Organize data (see table).  
 ②  $Y = C + S_p + (T - TR)$  in 2004  
 $4000 = 3000 + 500 + (T - TR) \Rightarrow (T - TR) = 500$  ②  
 ③  $S_G = (T - TR) - G$   
 $S_G = 500 - G$   
 $NS = S_p + S_G$   
 $NS = 500 + 500 - G$   
 $NS = 1000 - G \Rightarrow 0 \leq G \leq 1000$  [limits for G]  
 ④  $I = NS$  in equilibrium  
 if  $G = 0 \Rightarrow NS = 1000 \Rightarrow I = 1000$   
 if  $G = 1000 \Rightarrow NS = 0 \Rightarrow I = 0$  } Range for I in 2004  
 ⑤ Govt Deficit in 2005 =  $-S_G$  in 2004 + 500  
 Govt Deficit in 2005 =  $G - 500 + 500 = G$  [recall G in 2004]  
 ⑥ if  $G = 0 \Rightarrow S_G$  in 2005 = 0  $\Rightarrow NS' = 1500 + 0 \Rightarrow I' = 1500$   
 $\Delta I = I' - I = 1500 - 1000 = 500$

Or, here is a simpler proof

$$Y = C + S_p + (T - TR)$$

Between 2004 and 2005

$$\Delta Y = 1000$$

$$\Delta S_p = 1000$$

govt deficit  $\uparrow$  by 500  $\Rightarrow$   $S_G \downarrow$  by 500

In the loanable funds mkt:

In 2004

$$I_1 = S_{p1} + S_{G1}$$

In 2005

$$I_2 = S_{p2} + S_{G2}$$

$$\Delta I = I_2 - I_1 = \Delta S_p + \Delta S_G$$

$$\Delta I = \Delta S_p + \Delta [(T - TR) - G]$$

$$\Delta I = 1000 + (-500)$$

$$\Delta I = 500$$



11. Calculate the leakages in 2004.

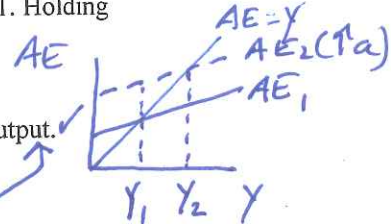
- a. \$500
- b. \$1,000
- c. \$3,500
- d. There is not enough information to answer this question.

Leakages in 2004:

$(T - Tr) + Sp = \text{Total Leakages}$  (remember this is a closed economy)  
 $500 + 500 = 1000$

12. Consider an economy using a Keynesian model. The economy is initially in equilibrium at  $Y_1$ . Holding everything else constant, if there is an increase in the level of autonomous consumption this will

- a. Cause the equilibrium level of real GDP to increase. ✓
- b. Cause inventories to decrease if the economy continues to produce at its initial level of output. ✓
- c. Cause output to be expanded via the multiplier process. ✓
- d. (a), (b) and (c) are all true statements.



Use the following information about a closed economy to answer the next two questions.

$C = 100 + 0.5(Y - T)$   
 $I = 100$   
 $G = 70$   
 $T = 0.2Y$

$Y = AE$  in eq.  
 $Y_e = C + I + G$  since  $(X - M) = 0$   
 $Y_e = 100 + 0.5(Y_e - T) + I + G$   
 $.5Y_e = 100 + 0.5(.2Y) + 100 + 70$   
 $.6Y_e = 270$

W/  $AE_2$ , At  $Y_1$ , you have  $AE > Y_1 \Rightarrow$  inventories will  $\downarrow \Rightarrow$  producers see this as signal to  $\uparrow Y$  to wards  $Y_2 \Rightarrow$  this is multiplier process at work

13. What is the value of disposable income for this economy?

- a.  $0.5(Y - T)$
- b.  $100 + 0.4(Y - T)$
- c.  $0.8(Y - T)$
- d.  $0.8Y$

$Y_e = \frac{270}{.6}$   
 $Y_e = 450$

$\frac{450}{.6} = \frac{270 \cdot 10}{6}$   
 $\frac{450}{.6} = \frac{2700}{6}$   
 $\frac{450}{.6} = 450$

if  $Y_e = 450$ , what is disposable income?

Disposable Income =  $Y - T$   
 Disposable Income =  $Y - .2Y$   
 Disposable Income =  $.8Y$

14. What is the equilibrium level of income for this economy?

- a. \$190
- b. \$270
- c. \$450
- d. \$900

15. BiCi Credit is a bank operating in the country of Moneyland. The reserves that BiCi credit holds in an account with Moneyland Central Bank are considered:

- a. Liabilities in the balance sheet of BiCi Credit.  $\times \Rightarrow$  no assets
- b. Assets in the balance sheet of Moneyland Central Bank.  $\times \Rightarrow$  no liabilities
- c. Liabilities in the balance sheet of Moneyland Central Bank. ✓
- d. They are not accounted for in the balance sheets of either BiCi Credit or Moneyland Central Bank.  $\times$

Moneyland Central		BiCi	
A	L	A	L
T-bills	Reserves	Reserves	DD
		Earning Assets	

16. Suppose the demand and supply of money are given by the following equations:

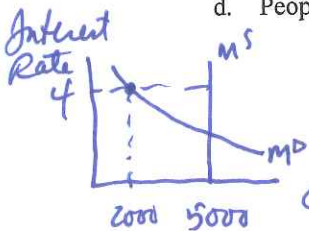
Demand:  $M^D = 10,000 - 2,000r$

Supply:  $M^S = 5,000$

In the above equations,  $r$  is the interest rate,  $M^D$  is money demand, and  $M^S$  is money supply. Furthermore, suppose that the interest rate is currently 4% ( $r = 4$  in the above equation). Which of the following is TRUE?

- a. People will want to hold money since banks are paying relatively high interest rates.  $\times$
- b. People will want to buy bonds and thus, the interest rate will rise.  $\times$
- c. People will want to buy bonds and this increased demand for bonds will lead to lower interest rates. ✓
- d. People will want to sell bonds, and this decreased demand for bonds will lead to higher interest rates.  $\times$

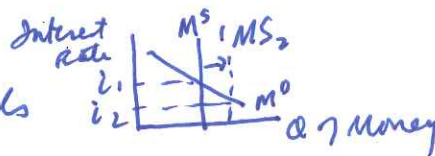
Don't worry too much about this one



if  $r = 4$ ,  $M^D = 10,000 - 2000(4)$   
 $M^D = 2000$

$M^D < M^S$  when  $r = 4 \Rightarrow$  people don't want to hold money, they want to hold bonds  $\Rightarrow$  so demand for bonds shifts out  $\Rightarrow$  Bonds  $\uparrow \Rightarrow i \downarrow$

Don't worry too much about the price of bonds



17. Which of the following is most likely to be a consequence of an open market purchase of bonds by the Federal Reserve?

- a. The money supply will increase, the price of bonds will fall, the interest rate will fall, and output will increase. ✓
- b. The money supply will increase, the price of bonds will increase, the interest rate will fall, and output will increase. ✓ *→ as i ↓, I ↑ → Y ↑*
- c. The money supply will decrease, the price of bonds will fall, the interest rate will increase, and output will decrease. *↳ as i ↓, P bonds ↑*
- d. The money supply will decrease, the price of bonds will increase, the interest rate will rise, and output will fall. ✗

18. Suppose the Fed increases the level of reserves in an economy by \$500 through an open market purchase. In which of the following situations will this \$500 increase in reserves have the largest short run effect on the money supply?

- a. People hold all of the new reserves as currency. *No multiplier effect*
- b. People hold the new reserves as equal amounts of currency and demand deposits and banks maintain a reserve ratio of 10 percent. *↳ no multiplier effect*
- c. People hold the new reserves as demand deposits, and banks maintain a reserve ratio of 50 percent. *money multiplier equals 2*
- d. People hold the new reserves as demand deposits, and banks maintain a reserve ratio of 10 percent. *money multiplier equals 10*

19. According to the aggregate supply and demand model, holding everything else constant, a decrease in the aggregate price level leads to which of the following sequences?

- a. The money demand curve will shift to the right, the interest rate will increase, the aggregate expenditure line will shift downward, and there will be movement upward along the aggregate demand curve. ✗
- b. The money demand curve will shift to the left, the interest rate will fall, the aggregate expenditure line will shift upward, and there will be movement downward along the aggregate demand curve. ✗
- c. The money demand curve will shift to the left, the interest rate will fall, the aggregate expenditure line will shift downward, and there will be movement upward along the aggregate demand curve. ✗
- d. The money demand curve will shift to the right, the interest rate will fall, the aggregate expenditure line will shift upward, and there will be movement downward along the aggregate demand curve. ✗

Delete: Will not cover adequately this semester

Answer the next two questions using the following information.

Money Supply:  $M^S = 7,000$

Money Demand:  $M^D = 8,000 - 10,000r$  (e.g. 5% would mean that  $r = 0.05$ )

$C = 10,000 + 0.8(Y - T) - 200P$

$I = 5,000 - 6,000r$

$G = 2,000$

$T = 2,000$

$X - M = 1,200$

Aggregate Demand (AD):  $Y = C + I + G + (X - M)$

Aggregate Supply (AS):  $Y = 7,000P$

① Find money market eq. *Interest Rate*

$$7000 = 8000 - 10000r$$

$$10,000r = 1000$$

$$r = .1 \text{ or } 10\%$$

② Find I when  $r = .1$

$$I = 5000 - 6000(.1) = 5000 - 600 = 4400$$

③ Find where AD = AS ⇒ to get  $Y_e$  &  $P_e$ :

$$Y_e = 10,000 + .8(Y_e - T) - 200P + 4400 + 2000 + 1200$$

$$.2Y_e = 17,600 - .8(2000) - 200P$$

$$.2Y_e = 16,000 - 200P$$

$$AD: Y_e = 80,000 - 1000P$$

20. What is the equilibrium level of output (Y) and the equilibrium level of investment (I)?

- a. 70,000; 4,400. ✓
- b. 120,000; 4,400
- c. 80,000; 6,000.
- d. 110,000; 6,000.

$80,000 - 1000P_e = 7000P_e$

$$80,000 = 8000P_e$$

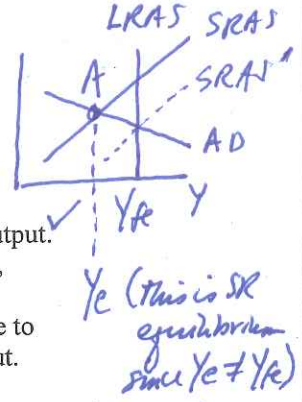
$$P_e = 10$$

using AS:  $Y_e = 7000(P_e) = 70,000$

using AD:  $Y_e = 80,000 - 1000(P_e) = 70,000$

21. Think about the aggregate demand and aggregate supply model when answering this question. Suppose the economy is in equilibrium but operating below full-employment output. What will happen in the long run in this economy?

- a. Nothing will happen. There is no need for adjustment in this market.
- b. Adjustment in the labor market will cause an outward shift in the short-run aggregate supply curve, bringing us back to equilibrium with the long-run aggregate supply curve at the full employment output.
- c. Adjustment in the money market will cause an inward shift in the short-run aggregate supply curve, bringing us to equilibrium with the long-run aggregate supply curve at the full employment output.
- d. Adjustment in the output market will cause an outward shift in the short-run aggregate supply curve to bring us back to equilibrium with the long-run aggregate supply curve at the full employment output.



Use the following Keynesian Model of a closed economy to answer the next two questions.

$$Y = C + S + T$$

$$AE = C + I + G$$

$$Y = AE \text{ in equilibrium}$$

$$C = a + b(Y - T)$$

In LR, SRAS shifts to SRAS' as nominal wages fall  $\Rightarrow$  returns economy to  $Y_c$

The aggregate consumption function of Badgerland is linear in disposable income (Y - T). Assume that the economy is in equilibrium each year.

Y - T  
900  
1050  
1300

Year	Y	T	C	I	G	S
2004	1000	100	830	70	100	70
2005	1200	150	935		200	115
2006	1500	200	1110	100	290	

$Y = C + T + S$

In 2004  
 $1000 = 830 + 100 + S$   
 $S = 70$  ①

In 2005  
 $1200 = C + 150 + 115$   
 $C = 935$

22. The consumption in 2005 is \_\_\_; the consumption in 2006 is \_\_\_.
- a. 935; 1000.
  - b. 900; 1100.
  - c. 900; 1000.
  - d. 935; 1110.

$$MPC = \frac{\Delta C}{\Delta(Y-T)} = \frac{935 - 830}{1050 - 900}$$

$$MPC = \frac{105}{150} = \frac{21}{30} = \frac{7}{10} = .7$$

23. What is the nominal growth rate of government spending (G) between 2004 and 2006?
- a. 190%
  - b. 150%
  - c. 90%
  - d. 50%

$Y = C + I + G$

$\Rightarrow G \text{ in } 2004 \Rightarrow 1000 = 830 + 70 + G$   
 $G = 100$  ④

$G \text{ in } 2006 \Rightarrow 1500 = 1110 + 100 + G$   
 $G = 290$  ⑤

$C = a + b(Y - T)$   
 $C = a + .7(Y - T)$   
 $830 = a + .7(900)$   
 $830 = a + 630$   
 $a = 200$

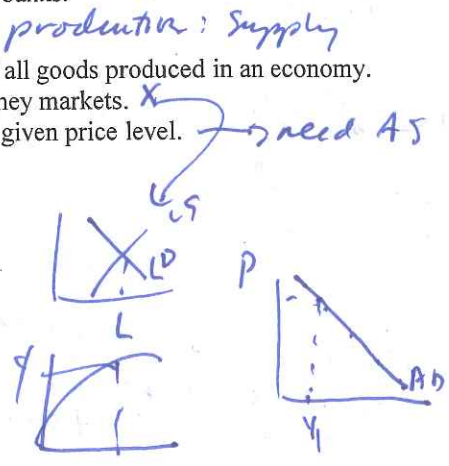
$C = 200 + .7(Y - T)$

24. If the Federal Open Market Committee decides to expand the money supply, then it will
- a. raise the discount rate to member banks.
  - b. issue directions to purchase government securities, thus putting more reserves in member banks.
  - c. issue directions to sell government securities, thus taking reserves from member banks.
  - d. order new Federal Reserve notes delivered to member banks.

$\Rightarrow C \text{ in } 2006:$   
 $C = 200 + .7(1300)$   
 $C = 1110$  ③

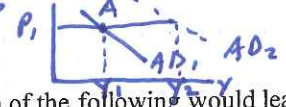
25. If the Federal Open Market Committee decides to expand the money supply, then it will
- a. raise the discount rate to member banks.
  - b. issue directions to purchase government securities, thus putting more reserves in member banks.
  - c. issue directions to sell government securities, thus taking reserves from member banks.
  - d. order new Federal Reserve notes delivered to member banks.

26. The aggregate demand curve
- a. represents the relationship between prices and quantities of all goods produced in an economy.
  - b. is derived from equilibrium conditions in the labor and money markets.
  - c. gives the equilibrium level of real GDP corresponding to a given price level.
  - d. plots the interest rate as a function of output.

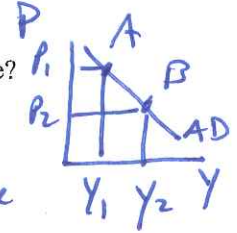
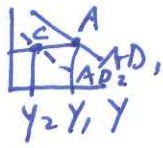


$\left[ \frac{290 - 100}{100} \right] (100\%) = 190\%$

causes a shift  
 $\uparrow M^s \Rightarrow \downarrow \text{in rate} \Rightarrow \uparrow \text{in } I \Rightarrow \uparrow \text{in AD}$



causes a shift  
 $\Delta \text{ in price} \rightarrow \text{in this case aggregate price level}$

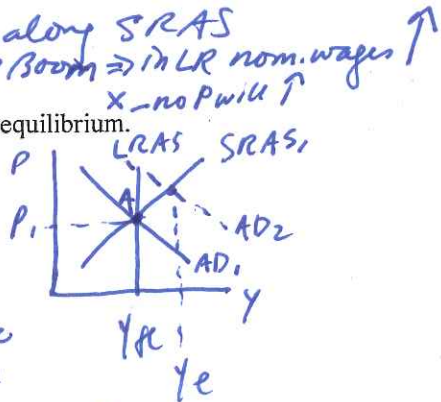


27. Which of the following would lead to a downward movement along the aggregate demand curve?
- a. a decrease in government purchases.
  - b. an increase in the money supply.
  - c. a decrease in the price level.**
  - d. a decrease in taxes.  $\rightarrow$  causes AD to shift right

28. Which of the following would shift the aggregate demand curve to the right?
- a. increase in government purchases, investment spending, autonomous consumption, taxes, or the money supply.
  - b. increase in government purchases, investment spending, autonomous consumption, or the money supply.**
  - c. increase in government purchases, investment spending, autonomous consumption or taxes.
  - d. decrease in government purchases or investment spending, and increases in autonomous consumption, taxes, or the money supply.

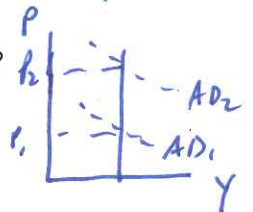
29. The aggregate supply curve would shift downward if
- a. unit costs increase due to an increase in output.  $\rightarrow$  shifts SRAS to left
  - b. the wage rate increases.  $\rightarrow$  shifts SRAS to left
  - c. good weather increases crop yields.**  $\rightarrow$  shifts SRAS to right
  - d. an increase in real GDP causes the price level to decrease.  $\rightarrow$  movement along SRAS

30. If a demand shock causes an economy to operate at a point above potential GDP, then
- a. the aggregate supply curve will shift to return the economy to the original point of equilibrium.
  - b. the economy will correct itself through rising wages and prices.**
  - c. this short run equilibrium point will become the new long run equilibrium GDP.
  - d. the economy will correct itself through falling wage rates and prices.

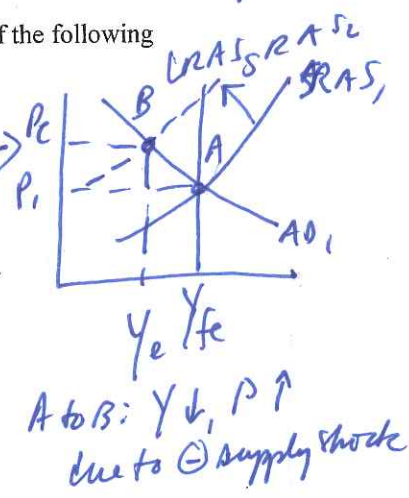
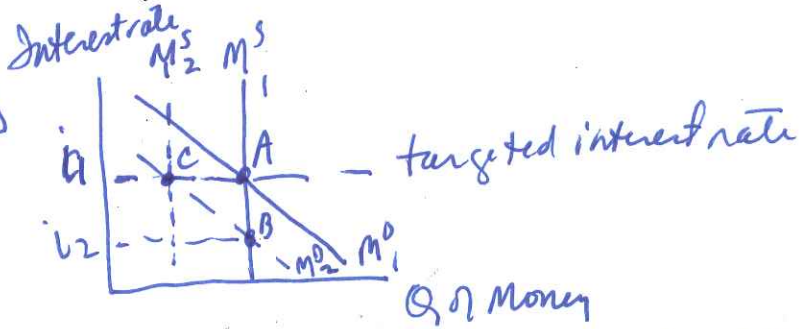


31. In the long run AS-AD model,
- a. the position of the AD curve determines output.  $\rightarrow$  No LRAS det. Yfe
  - b. the self-correcting mechanism of the economy is irrelevant.
  - c. the AS curve shifts leftward whenever the economy is growing.
  - d. the position of the AD curve determines the price level.**

32. If the price level is increasing and output is falling, which of the following could be the reason?
- a. A positive supply shock.
  - b. A positive supply shock combined with a positive demand shock.
  - c. A negative supply shock.**
  - d. A positive demand shock.



33. If the Fed is maintaining an interest rate target and notices a drop in the interest rate, which of the following would be its likely interpretation and response?
- a. Money demand has increased; sell government bonds.
  - b. Money supply has decreased; buy government bonds.
  - c. Money demand has decreased; sell government bonds.**
  - d. Money demand has increased; buy government bonds.



Fed notices eg. in money mkt has gone from A to B ( $\downarrow$  in interest rates) - Fed wants interest rate to be  $i_1$  + can achieve this by  $\downarrow M^s$  (see point C).  
 $\rightarrow \downarrow M^s$  Fed must sell govt. bonds

self-correcting mechanism  
 is how we get to  $Y_{fe}$