Problem 1. The above figure (um, it's in midterm 2) shows the labor market for a country, with labor measured in workers. Currently the price level is P = \$10. Wages and prices are fully flexible (so, we are talking about the long run). Suppose that the price level increases by 5%. Then, the real wage will change to *not change*.

The real wage W/P is on the y-axis. This means that a change in P will be a movement along the curves, rather than any sort of shift. Therefore in equilibrium, the economy will go right back to the intersection of the curves so the real wage will remain at 10.

Shifts in Labor Demand. *At the existing real wage*, the amount of capital and advances in technology both shift labor demand to the right. (Note that both are increases in labor productivity.)

Shifts in Labor Supply. Any factor that causes households to supply more or less labor to business firms *at the given real wage* would cause a shift in the function. An increase in population is such a factor. Moreover, if for any given population size a larger share of that population decides to work, then the supply of labor will increase.

Problem 2. Arbitrage would ensure that two assets that are identical in terms of risk, liquidity, and tax treatment, *will have the same expected rate of return.* To see why they might not have the same price or future payout, consider the following two bonds that have the same risky, liquidity, and tax treatment:

- Bond A: buy for \$100 today, receive \$110 in a year,
- Bond B: buy for \$1000 today, receive \$1150 in a year.

The Bond A has an interest rate of 10%, whereas Bond B has an interest rate of 15%. This seems odd—if the bonds are otherwise identical, then you would expect that buying ten Bond A would have the same payoff as buying one of Bond B. But in this case, people would rather buy Bond B and sell Bond A. When people buy a lot of Bond B, it will bring up the price of Bond B. When people dump Bond A, it will lower the price of Bond A. This is arbitrage. Ultimately arbitrage will ensure that the market looks something like

- Bond A: buy for \$97.78 today, receive \$110 in a year,
- Bond B: buy for \$1022.22 today, receive \$1150 in a year,

in which case both bonds will have an interest rate of 12.5%.

Problem 3. The above graph (um, not here, look at the midterm itself) shows some labor market data for the two years 2005 and 2015. Which of the following set of events could have caused the labor market to move from the 2005 point to the 2015 point (assume that these were the only possible events)?

Choice A. No matter how you draw the supply and demand curves, you'll end up with the real wage falling, so this can't possibly be right—it could not have possibly cause the equilibrium to change from the 2005 point to the 2015 point.

Choice B. No matter how you draw the supply and demand curves, you'll end up with labor increasing, so this can't possibly be right—it could not have possibly cause the equilibrium to change from the 2005 point to the 2015 point.

Choice C. You can draw this in certain ways in which it won't exactly conform to the picture; but there are *some* possible ways it would match the graph. So this *could* have caused the change seen.

Problem 4. The table below shows production and expenditure data for three countries.

	Country 1	Country 2	Country 3
C	12	10	16
I	4	8	6
G	10	12	7
EX	6	5	3
IM	2	4	6
Y	30	35	25

In Country 2,

(a) the goods market is in equilibrium

(b) there is excess demand for goods and services

(c) there is excess supply of goods and services

(d) there is an unplanned increase in inventories

(e) none of the above

Problem 5. Which if the following sequences of events is one of the explanations for the slope of the AD function?

(a) $P \downarrow \implies$ Real Wealth $\uparrow \implies C \uparrow \implies AD \uparrow \implies Y \uparrow$

(b) $P \downarrow \implies$ Real Wealth $\downarrow \implies C \uparrow \implies AD \uparrow \implies Y \uparrow$

(c) $P \downarrow \implies$ Real Wealth $\uparrow \implies C \downarrow \implies AD \uparrow \implies Y \uparrow$

(d) $P \uparrow \implies$ Real Wealth $\uparrow \implies C \uparrow \implies AD \uparrow \implies Y \uparrow$

Problem 6. Which if the following sequences of events is one of the explanations for the slope of the AD function?

(a) $P \downarrow \Longrightarrow (EX - IM) \downarrow \Longrightarrow AD \uparrow \Longrightarrow Y \uparrow$

(b) $P \uparrow \Longrightarrow (EX - IM) \uparrow \Longrightarrow AD \uparrow \Longrightarrow Y \uparrow$

(c) $P \downarrow \Longrightarrow (EX - IM) \uparrow \Longrightarrow AD \uparrow \Longrightarrow Y \uparrow$

(d) $P \uparrow \Longrightarrow (EX - IM) \downarrow \Longrightarrow AD \uparrow \Longrightarrow Y \uparrow$

Problem 7. Which if the following sequences of events is one of the explanations for the slope of the AD function?

(a) $P \downarrow \implies$ Demand for Money $\uparrow \implies R \uparrow \implies AD \uparrow \implies Y \uparrow$

(b) $P \downarrow \implies$ Demand for Money $\downarrow \implies R \downarrow \implies AD \uparrow \implies Y \uparrow$

(c) $P \downarrow \implies$ Demand for Money $\downarrow \implies R \uparrow \implies AD \uparrow \implies Y \uparrow$

(d) $P \uparrow \implies$ Demand for Money $\uparrow \implies R \uparrow \implies AD \uparrow \implies Y \uparrow$

Problem 8. Which of the following events will cause a shift in the aggregate demand function? If there will be a shift, indicate the direction in which aggregate demand will shift.

(a) An increase in taxes

(b) An increase in transfer payments

(c) Expected increase in future real disposable income

(d) Increase in the nominal interest rate

(e) Increase in expected inflation

(f) Increase in nominal wealth

(g) Increase in investment spending

(h) Increase in expected future profits

(i) Uncertainty about future profits

(j) Increased government purchases

(k) Increase in net exports

(l) Increase in foreign prices

(m) Increase in foreign income levels

Problem 9. Economists and policymakers are interested in the behavior of investment spending because

(a) Even though it is not the largest component of aggregate demand, it is the most volatile one

(b) It is the largest and most volatile component of aggregate demand

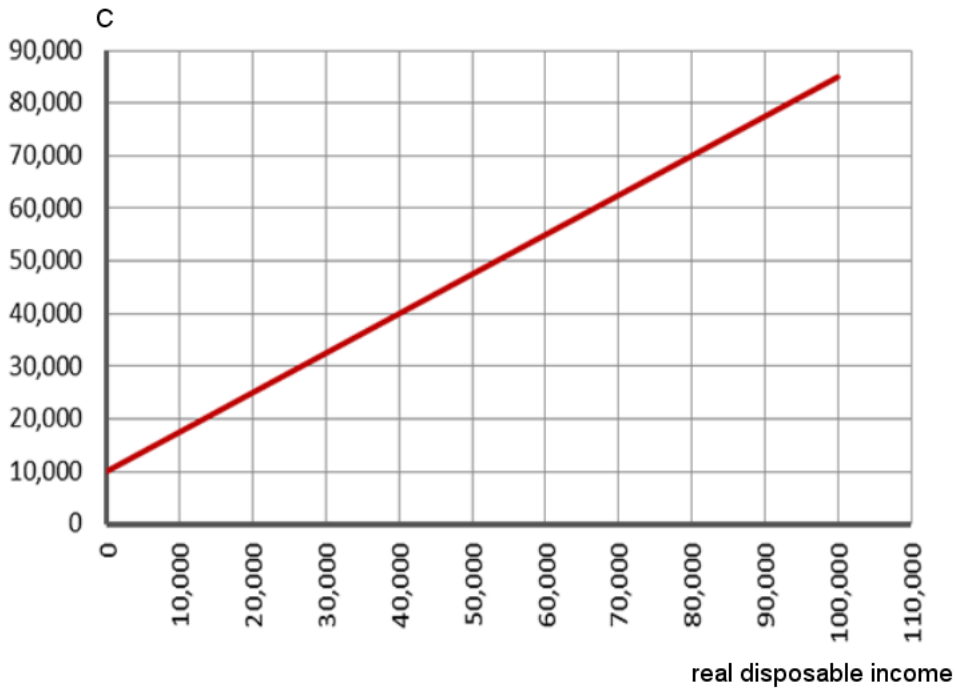
(c) It is the largest component of aggregate demand

(d) It is under the direct control of the government

(e) None of the above

(f) All of the above, including (e)

Problem 10.



The graph below shows a linear consumption function for a country. What is the marginal propensity to consume, MPC, for this country? What is the marginal propensity to save, MPS?

(a) $MPC = 0.75$, $MPS = 0.25$

(b) $MPC = 0.80$, $MPS = 0.25$

(c) $MPC = 0.90$, $MPS = 0.10$

(d) $MPC = 0.95$, $MPS = 0.10$

(e) none of the above

Problem 11. If the marginal propensity to consume is 0.90, and investment spending increases by 10 units, then the magnitude of the shift in the aggregate demand function will be

(a) 9

(b) 10

(c) 90

(d) 100

(e) none of the above

Problem 12. The government purchase of goods and services increases, financed by raising an equal amount of taxes. The effect of this can be represented as

(a) a movement down and to the right along the AD function

(b) a movement up and to the left along the AD function

(c) a rightward shift in the AD function

(d) a leftward shift in the AD function

(e) none of the above