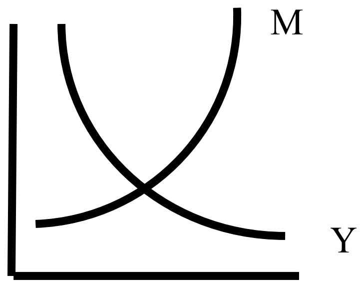
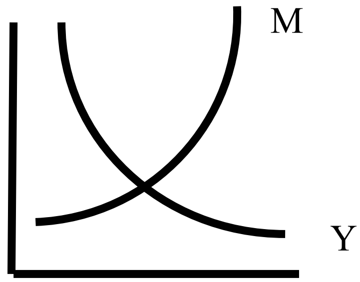
Homework Set Eleven

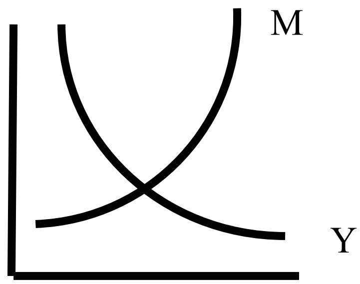
1. (20%) Senator Alicia Mustard has announced her retirement. She plans to leave Washington and retire to the Midwest, and enroll at the local university to study economics. A staffer, who, upon hearing of her plans to study economics, muttered “it’s about time.” Alas he was overhead and summarily fired; though he was immediately hired by the research staff of the opposition political party. He brought with him some of her more juicy quotes. Your task is to point out the flaw in each of her pearls of “wisdom”.
   - ***a.*** The best rate of inflation is no inflation at all
   - ***b.*** Inflation transfers assets from creditors to debtors.
   - ***c.*** A temporary increase in spending, no matter how financed, will raise prices.
   - ***d.*** Inflation robs us all.
   - ***e.*** The government never gains from inflation.
   - ***f.*** A business cycle must occur when there is a decline in demand
   - ***g.*** The Phillips Curve gives the relation between inflation and unemployment
   - ***h.*** The Phillips Curve can be derived from Okun’s Law
   - ***i.*** A permanent increase in government spending financed by a head tax must lead to more of an increase in the price level than a temporary increase in government spending.
   - ***j.*** If there is a decline in GDP, as in a business cycle, there must be a movement along the long run labor supply curve.

2. (24%) For each of the following situations, draw the impact on the Y and M curves for the United States and tell me the impacts on the price level and the interest rate. I have drawn the initial Y and M curves for you. Explain your reasoning.

Remember: these are the Y and M curves for the United States

	The government announces plans to spend $10,000,000 this year to build a monument to Irving Fisher, to be paid for with freshly printed dollar bills. (You may treat this as a useless project if you can name two major contributions Fisher made to macroeconomics

	Russians, who hold significant numbers of US dollars, decides to hold euros instead. Bernake responds by an open market operation which cut the monetary base by an exact offset. (That is, if Russians turn in $X, MB declines by $X, thus leaving the non-Russian component of the MB unchanged)

	Santa Claus repeats the Christmas Eve Caper in the United States. BUT, confused by perhaps too much Christmas Spirits, he gives everyone X Euros for each X dollars they hold.

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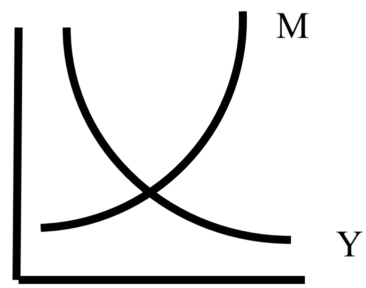
<td>
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<td>Santa Claus repeats the Christmas Eve Caper in the United Kingdom. BUT definitely confused by Christmas Spirits, he gives everyone X dollars for each X pounds they hold.</td>
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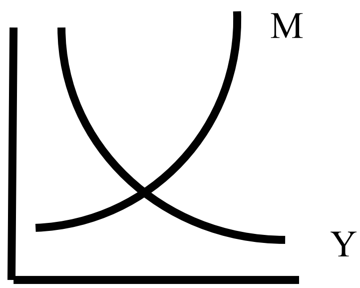
<td>
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<td>The government announces plans to raise the tax rate on wage income by 5%, the proceeds to be used to pay for things that people are already consuming.</td>
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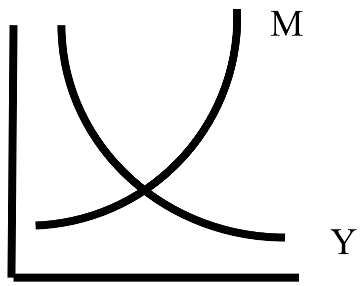	Marihuana is legalized in the United States, and it now becomes possible to purchase it at the local grocery store. (Hint: concentrate on the effects on money demand)

3. (10%) Explain whether you agree or disagree with the statement: an increase in the money supply will raise interest rates. Hint: the correct answer is to say it is complicated, which is a nice way of saying you want to provide a thorough answer to this question.

4. (12%) West Freshwater is a mid sized country, well off the beaten trail for trade and tourism. While scholars visit the country from time to time, it is essentially a closed economy. Professor Arthur Dour, Freshwater's most distinguished economist recently gave a lecture on economic conditions in Freshwater. As he noted, traditionally:

   - The money supply is growing at about 6% a year.
   - The country has a long history of growth, in real terms, of 3% a year
   - There is no national debt.
   - Government purchases consume a fraction ν of GDP.
   - Government expenditures are financed by taxes on wage income and money creation.
   - While the people in the country are relatively knowledgeable, they do suffer from time to time from imperfect information.

   Alas, all is not well in Freshwater. Its citizens love music and have, for years, been pirating music from western countries; the latest hits have been reproduced by its thriving CD industry. Its citizens have just discovered the internet and, with it, the ability to download music illegally. (Since Freshwater has tolerated for years the pirating of music from abroad, the government is in no position to object to pirating of music by its own citizens.)

   In Freshwater, this is a big deal. Dour is concerned about its implications for the economy. He fears layoffs throughout the music industry, and a recession. Voters in Dodgeville, the center of Freshwater's music industry are particularly concerned.

   The government has decided to deal with these employment problems by a major expenditure to improve parks around Dodgeville, an effort that will take a year to complete. It will finance the expenditure with a special one year surcharge on wage taxes. The program will come as a complete surprise. And since no one ever visits these parks, the expenditures may never be noticed.

     - Explain why Professor Dour is correct in labeling this a real business cycle.

- Show the effect of this unexpected increase in spending on prices, interest rates, and the short run level of output. (And remember, that a well-labeled and well-explained graph is worth a thousand words). Explain why these effects come about. NOTE: your graphs should show the effects of the government program; take the effects of the declining demand in CD's as given.

- How would your answers change if the increase in spending was fully anticipated? Why?

5. (5%) The Freshwater Alliance of CD Laborers is picketing complaining that this shift in public taste leads to loss of jobs, not just for those employed in the CD industry, but also jobs for people providing services to CD laborers. They estimate that each worker in the CD industry provides employment for about 4 people in retail, dry cleaning, and the like. They also argue that even if the CD workers turn to other tasks, they will not find any demand for their services. They insist the government take steps to stop this illegal downloading. When asked to comment on this argument, Dour just snorted and said any of his students could write a cogent 150 word essay explaining why, though there might be certain short run adjustment issues, the citizens of Freshwater would be better off in the long run.

    - Make me proud.

6. (5%) West Knockwurst is about to increase spending permanently. At the Urging of Senator Mustard, the increase will be financed by a higher tax on wage income. Senator Mustard claims that this means the increase will not be inflationary. She bases her argument on the assumption (which you should assume is correct) that a permanent increase of $X in government spending financed by wage taxes) lead to a decrease of $X in consumption demand. Use the Y and M curves to determine if the Senator is correct.

7. (24 %) Each of the following twelve questions asks you to consider a country NEUTRAL, with Y and M curves describing the price level and interest rate in year 1. Different things happen in each case, and your task is to figure out what happens to the Y and M curves. (Answers like shifts up and to the left, or something like that are appropriate). Given what happens to the Y and M curves, what happens to the Price level? The interest rate? (Answers like increases, decreases, or uncertain are appropriate).

    To make life easy, both for you and the grader, just enter your answers by circling the right entry in the following table.

Part	Y Curve	M Curve	Price :Level	Interest Rate
a)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
b)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
c)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
d)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
e)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
f)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
g)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
h)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
i)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
j)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
k)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
l)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
m)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
n)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
o)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
p)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
q)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
r)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
s)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?
t)	UR DL NC	UL DR NC	+ - NC ?	+ - NC ?

a) The government spends $100 million on a monument, paying for it with a tax on all individuals, independent of how much they work

b) The government spends $100 million on a monument, paying for it with a tax on how much people earned in both wage income and interest income last year, independent of how much they work

c) The government spends $100 million on a monument, paying for it with a tax on how much people earn this year in wages

d) The government spends $100 million on a monument, paying for it with a tax on how much interest income people will earn this year, thereby changing the after tax discount rate. Hint: do not forget the money demand function.

e) The government spends $100 million on a monument, paying for it with a tax on how much people earn in interest income next year. (The government borrows $100 million to cover the costs until the taxes come in).

f) The government begins to spend $100 million a year on maintaining a monument, paying for it with a tax on all individuals, independent of how much they work.

g) The government begins to spend $100 million a year on maintaining a monument, paying for it with a one time tax on how much people earned in both wage income and interest income last year, independent of how much they work. (The proceeds are invested so as to yield $100 million a year in interest).

h) The government begins to spend $100 million a year on maintaining a monument, paying for it with a tax on how much people earn each year in wages.

i) The government begins to spend $100 million a year on maintaining a monument, paying for it with a tax on how much interest income people earn each year.

j) The government spends $100 million on a monument. The funds are borrowed.

k) The government spends $100 million on a monument. The funds are raised by printing $100 million of new money.

l) The government spends $100 million on a monument. The funds are borrowed. While the government has absolutely no intention of doing so, there is a universal expectation that it will pay for the project by printing $100 million of new money