Problem Set C3
Econ 302 - Haworth
Due date: Friday, August 7 (by 11:59pm)
Note that Blackboard tends to shut down at 10pm, but that, if it does, then you can still email your problem set to Professor Haworth (bmhaworth@louisville.edu)

1. Consider an economy described by the following equations.
(note that all variables have their same definitions from class)

$C = 50 + 0.75(Y - T)$	C = consumption, Y = income (GDP)
$I = 200 - 20r$	I = investment, r = interest rate
$NX = 200 - 50e$	NX = net exports, e = nominal exchange rate
$G = 200$	G = government spending
$T = 200$	T = taxes
$r = r^* = 5$	r* = world interest rate
$L(r,Y) = Y - 40r$	L(r,Y) = demand for real money balances
$M = 3000$	M = money supply
$P = 3$	P = price level

Assume that these equations correspond with the Mundell-Fleming IS*-LM model from class and Chapter 13. Use this model to predict what would happen to income (GDP), the exchange rate, and the trade balance under both floating and fixed exchange rates in response to each of the following events (below). Note, you can use graphs and discussion to answer questions a-c.

a. Decrease in consumer confidence about the future leads to consumers/households spending less and saving more.
b. The introduction of new foreign-produced luxury cars (from Japan) lead to some consumers buying these foreign-produced cars instead of domestic (US) produced cars.
c. The introduction of automated teller machines (ATMs) reduces the demand for money.
d. Given the equations above, calculate the equilibrium exchange rate, level of income and net exports (when the economy operates at its equilibrium).
e. Assume a floating exchange rate. Calculate what happens to the exchange rate, level of income, net exports and money supply if the government increases its spending by 50.
f. Assume a fixed exchange rate. Calculate what happens to the exchange rate, level of income, net exports and money supply if the government increases its spending by 50.

2. Business executives and policymakers are often concerned about the competitiveness of US goods (i.e. the ability to sell US goods at a low price and earn profit in world markets).

a. How would a change in the nominal exchange rate affect competitiveness in the short run when prices are "sticky"?

b. Suppose you wanted to make domestic industries more competitive but did not want to alter aggregate income (Y). According to the Mundell-Fleming IS*-LM model from class and Chapter 13, what combination of monetary and fiscal policy should you pursue?

3. Assume that an economy has this Phillips Curve:

$\pi = \pi_{-1} - 0.5(u - 5)$ where π = current inflation rate
π_{-1} = last year's inflation rate
u = current unemployment rate

a. What is the natural rate of unemployment?

b. Graph the short-run and long-run relationship between unemployment and inflation.

c. How much cyclical unemployment is necessary to reduce inflation by 4 percentage points?

d. Inflation is running at 6%. The Central Bank wants to reduce it to 2%. Give two scenarios that will achieve this goal.