Name:
Section:
T.A. Name:

180.101 ELEMENTS OF MACROECONOMICS

Fall, 2011 **Problem Set #3** **Prof. Louis J. Maccini**

INSTRUCTIONS: Above, write your name, section number and T. A. name. Answer each question in the space provided, or on the back of the same sheet.

1. A decline in energy prices should reduce the average price level but otherwise leave the economy unaffected. True, false, uncertain. Explain in depth.

2. A country is at war, and the war is going badly. A politician argues that the fact that the war is not going well has caused a "crisis of confidence" among consumers and this will cause a recession. Is this possible? If so, how? Use an aggregate demand-aggregate supply analysis to answer the question. Explain intuitively what is going on.

3. Consider the following macroeconomic model of the economy operating under "slack conditions":

$$Y = E$$

$$E = C + I + G$$

$$C = 200 + (3/4)Y_{dis}$$

$$Y_{dis} = Y - TX + TR$$

$$TX = 240 + (1/3)Y$$

$$TR = 80$$

$$I = 220$$

$$G = 400$$

where Y is real income or output, E is aggregate real expenditure, C is real consumption expenditure, I is real investment expenditure, G is real government spending, Y_{dis} is real disposable income, TX is real tax revenues, TR is real transfer payments. Expenditures are measured in billions of dollars, so that, e.g., autonomous investment expenditures, is $220 billion.

a. Provide a brief explanation of each of the relationships of the model.

b. Calculate the equilibrium level of income. Show your work, explain why it is an equilibrium, and draw a graph that describes the equilibrium. Be sure to label properly the relevant axes and curves.

c. Suppose that Congress is concerned about the cost of sending children to college. It thus passes a bill that grants each family a $500 tax credit for each child that is in college, no matter what the household's income is. When aggregated over all families that have children in college, this amounts to an aggregate of $40 billion in tax credits. How can this policy be captured in the above model? Calculate the effect of this policy on real income. Draw a diagram to illustrate your answer. And explain carefully what is going on.