

**Economics 613: Macroeconomics I**

Fall 2006

Cornell University

**Problem Set #1**

Due: Friday, September 8, 2006

## 1 Deep Depression income-expenditure model

Consumption function:

$$C = \$7 \text{ billion} + 0.9(Y - T),$$

where  $C$  is consumption,  $Z$  is autonomous investment, and  $G$  is exogenous government expenditure.

1. Derive in 2 ways (a) the government expenditure multiplier, (b) the tax cut multiplier, and (c) the balanced budget multiplier. The first derivations should be based on the calculus applied to the "income = expenditure equation" (the so-called Keynesian cross). The second derivations should be based on the sums of infinite series based on money passing from hand to hand.
2. By using the second method (infinite series of money passing from hand to hand) explain the numerical differences among the 3 multipliers.
3. Why are these theoretical multipliers higher than the actual computed multipliers?
4. Why is the simple income = expenditure model unsuited to the current economic situation in the US?