# Midterm Review: Consumption Function, Multipliers

Econ 9: Introduction to Economics

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## How does the spending multiplier work?

If the government increases defense spending by $1 Billion, then defense contractors will hire and pay more workers, which will increase aggregate spending by more than the original $1 Billion.

$$Multiplier = \frac{1}{1 - MPC} = \frac{1}{MSC}$$

When the government taxes, the multiplier works in reverse because money is leaving the money supply

$$Tax\ Multiplier = \frac{MPC}{1 - MPC} = \frac{MPC}{MSC}$$

## Consumption Function

### Practice Problem

Case, Fair and Oster
Macroeconomics Chapter 9 Government and Fiscal Policy
Problem 2. Government of Altruia

Consumption function: C = 150 + 0.8 (Y - T)

> **Note:** the intercept (150) is what we consume that is not dependent on income

a. What are the values of the government spending multiplier and the tax multiplier?
c. What happens to the GDP if taxes are increased by 50?

a. The MPC is the slope of the consumption function (.8). We know the spending multiplier is:

$$Spending\ Multiplier = \frac{1}{1 - MPC} = \frac{1}{1 - .8} = 5$$

and the tax multiplier is equal to:

$$Tax\ Multiplier = \frac{MPC}{MSC} = \frac{0.8}{0.2} = 4$$

b. If we consider this economy one with no investments, consumption is our measure of aggregate expenditures (i.e. GDP).
The change in GDP due to a 50$ tax increase can be found using the following equation:

$$Change\ in\ Aggregate\ Demand\ (TAX) = \Delta tax\ x\ Tax\ Multiplier$$
$$= 4\ x\ 50 = \$200$$