Homework 7

1. Consider the Keynesian Cross model with international trade. Suppose that the equilibrium condition is given by
$$\mathrm{Y} = \mathrm{C} + \mathrm{I} + \mathrm{G} + \mathrm{EX} - \mathrm{IM},$$
where both the consumption (C) and the import (IM) are linear functions of the disposable income,
$$\mathrm{C} = 1000 + 0.75(\mathrm{Y} - \mathrm{T}),$$
$$\mathrm{IM} = 100 + 0.5(\mathrm{Y} - \mathrm{T}).$$
And we regard I, G, T, and the export (EX) as exogenous. Calculate the government expenditure multiplier and compare it with the closed-economy case.

2. Suppose that the IS equation is given by
$$Y = C(Y - T, r) + I(r) + G$$
$$C(Y - T, r) = a + b \cdot (Y - T) - c \cdot r$$
$$I(r) = d - e \cdot r$$
where $a > 0$, $0 < b < 1$, $c > 0$, $d > 0$, and $e > 0$ are all constants.
   a) Given an increase in G, say ΔG, how and how much does the IS curve shift?
   b) If there is an improvement in investor sentiment, say, $I(r)$ becomes
   $$I(r) = 2d - e \cdot r.$$
   Then how and how much does the IS curve shift?