Problem Set #4

1. In Japan, the population \( L \approx 125 \) million, capital stock \( K \approx ¥1500 \) trillion and output \( Y \approx ¥500 \) trillion so that
\[
k = \frac{K}{L} = ¥12 \text{ million and } y = \frac{Y}{L} = ¥4 \text{ million.}
\]
Assume that \( \delta = 0.04, n + g = 0.04, \text{ and } y = 1.9k^{0.3}. \)
a. If the Japanese want their current level of output to be a steady state level of output, what should their savings rate be? \( I/Y \) is currently about 22-23\%. Are they above or below the steady state savings rate. What does this imply?
b. What is the golden rule level of capital per worker? What is the golden rule savings rate which maximizes the level of per capita consumption? Is this different from the U.S.?

2. Some economists blame the onset of the Great Depression on an autonomous decline in spending, principally on construction spending. Others attribute it to a sharp decline in the money supply. Illustrate these explanations diagramatically and explain what simple fact you would look at to distinguish between them (ie. how could you decide which theory was correct?).

3. Ch 9, p268, #6
4. Ch 9, p279, #3
5. Ch 10, p309, #2
6. Ch 11, p335, #3
7. Ch 12, p362, #1

_Due Thursday 29 March_