Quiz 5

Question 1

Suppose the production function is $y = f(k) = \sqrt{k}$. Additionally, suppose the depreciation rate is 20 percent and the saving rate is 40 percent.

a. What is the steady-state level of capital in this economy?

b. The MPK $= \frac{1}{2\sqrt{k}}$. Find the Golden Rule level of capital in this economy? What is the appropriate saving rate?

c. Suppose you started with 8 units of capital. In order to reach the Golden Rule level of capital would investment be greater than, less than, or equal to depreciation in the current year given what you've found in (b)?

Question 2

a. Of increased saving, decreased population growth, and technological progress, which cause of economic growth also raises living standards?

In the lecture there was discussion of work done by Acemoglu, Johnson, and Robinson (AJR).

b. Where did European settlers practice exploitative policies?

c. What is the role of institutions according to AJR? Is institutional infrastructure persistent?

Question 3

a. Assume you begin in long run equilibrium. Draw the corresponding long run aggregate supply, short run aggregate supply, and aggregate demand curves.

Suppose the EPA reverses course and determines current climate abatement technology is too intensive and burdensome a cost to industrial manufacturers decreasing the cost of producing industrial goods.

b. Illustrate graphically what happens to the short run aggregate supply. Explains what happens to output and employment in the short run. What happens in order to return to LRAS?

c. Now suppose the Fed wishes to avoid in transitory changes in output. Supposing no changes to velocity, should the Fed increase or decrease the money supply to accomodate the change in aggregate supply.

d. Suppose the Fed's policy is succesful and the full employment level of output $\overline{Y}$ is maintained. What has happened to the price level?