SM 286A Section 15.7 Homework

1. Suppose the production function in the Solow growth model is $f(K, L) = K + L$.

a. Show that f is a homogenous function ($f(aK, aL) = af(K, L)$).

b. Write the differential equation for the Solow growth model.

c. Solve the equation.

d. Does the capital-labor ratio approach a constant as $t \to \infty$? If so, what is the constant? Compare with the example $f(K, L) = K^{\alpha}L^{1-\alpha}$ that is discussed in the text.