Quiz

1. Let the production function be $Y=K^{α}L^{β}$ where $α>0$ and $β>0$. The capital’s law of motion is

$$\frac{dK}{dt}=s×Y-d×K$$

where $s$ and $d$ are fixed. If $K=49$ in the long run, then what is $g\_{L}$, the growth rate of $L$? Show all your work.

2) The graphs below show the logarithm of capital (K) and population (L) in the US. The dotted lines are the linear trend-lines

a) Compute the slopes of the trend lines.

b) What are the growth rates of $K$ and $L$?

c) Find the long-run growth rate of GDP per capita according to the Solow’s model.

d) What is the long-run growth of information/knowledge?

1. Economies that rely on slavery were less successful in terms of economic growth. Give a short explanation.