1 Full-employment Effects of Government Debt

\[ Y = K^{1/2}L^{1/2}. \]

Savings out of disposable income, \( s = .10 \).
Labor force growth, \( n = .02 \).
Depreciation, \( \mu = 0 \).

Calculate:

(1) \( k^* \), the golden-rule capital-labor ratio
(2) \( \dot{k} \), the maximum sustainable capital-labor ratio
(3) \( k^0 \), the steady-state capital labor ratio when \( \Delta = 0 \)
(4) \( \Delta^{\text{max}} \), the maximum sustainable debt per head
(5) \( \Delta^{\text{min}} \), the maximum sustainable surplus per head

Plot:

(1) steady-state \( k \) on the vertical axis versus steady-state debt \( \Delta \) on the horizontal axis
(2) steady-state consumption \( c \) on the vertical axis versus steady-state debt \( \Delta \) on the horizontal axis

[Plotting hint: \( k \) is not in general a single-valued function of \( \Delta \). \( c \) is not in general a single-valued function of \( \Delta \).]