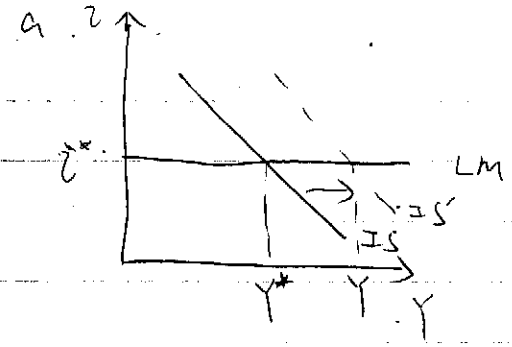
1. A consumption boom

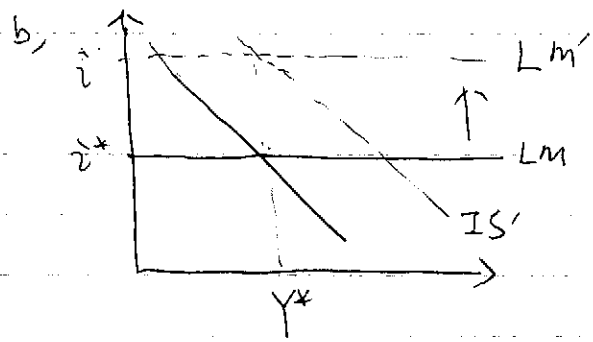
Suppose economy starts from a long-run equilibrium. Consumption boom shifts IS rightward to IS'

⇒ inflationary gap. $Y - Y^*$. higher inflation

a.



b)



Central Bank should raise interest rate by reducing money supply.

LM shifts up to LM'.

interest rate hikes from i^* to i.

which brings economy back to long-run equilibrium and lower inflation.

2. Golden steady state.

a. $Y = K^{\frac{1}{2}} N^{\frac{1}{2}}$.

$\frac{Y}{N} = \frac{K^{\frac{1}{2}} N^{\frac{1}{2}}}{N^{\frac{1}{2}} \cdot N^{\frac{1}{2}}}$ ie. $\frac{Y}{N} = \left(\frac{K}{N}\right)^{\frac{1}{2}} \cdot 1$ $y = k^{\frac{1}{2}}$ where $y = \frac{Y}{N}$ $k = \frac{K}{N}$

b. $y = k^{\frac{1}{2}}$ $mpk = \frac{dy}{dk} = \frac{1}{2} k^{-\frac{1}{2}}$ and mpk represents the slope of production curve.

By definition of golden state:

$mpk = \frac{1}{2} k^{-\frac{1}{2}}$ = slope of capital requirement line $(n+d)$

ie: $\frac{1}{2} k^{-\frac{1}{2}} = n+d = 0.25$. solve for k

we get $k = 4$. ie. golden rule steady-state k is 4.