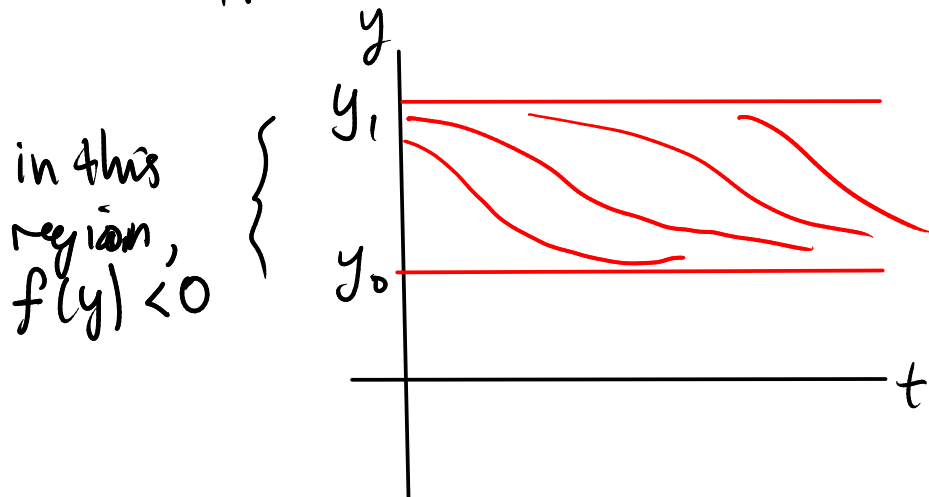


Suppose we have two critical points y_0, y_1



other solutions
can not cross
the critical points
(constant solutions)

Step 1: find critical points $f(y_0) = 0$

Step 2: what happens between critical points?

→ Draw the graph of $f(y)$

→ figure out where $f(y)$ is $\begin{cases} \text{positive.} \\ \text{negative.} \end{cases}$

$\frac{dy}{dt} = f(y)$: if $f(y)$ is positive, then y is increasing
if $f(y)$ is negative, then y is decreasing.

Example y = money in investment account

r = interest rate (continuously compounded)

$$\frac{dy}{dt} = ry - w \quad \leftarrow \text{fees}$$