

# Ejercicio de la Parábola

viernes, febrero 19, 2021 8:32 PM

$$\dot{X} = Y - X^2 + 3$$

$$\dot{Y} = Y - X + 1$$

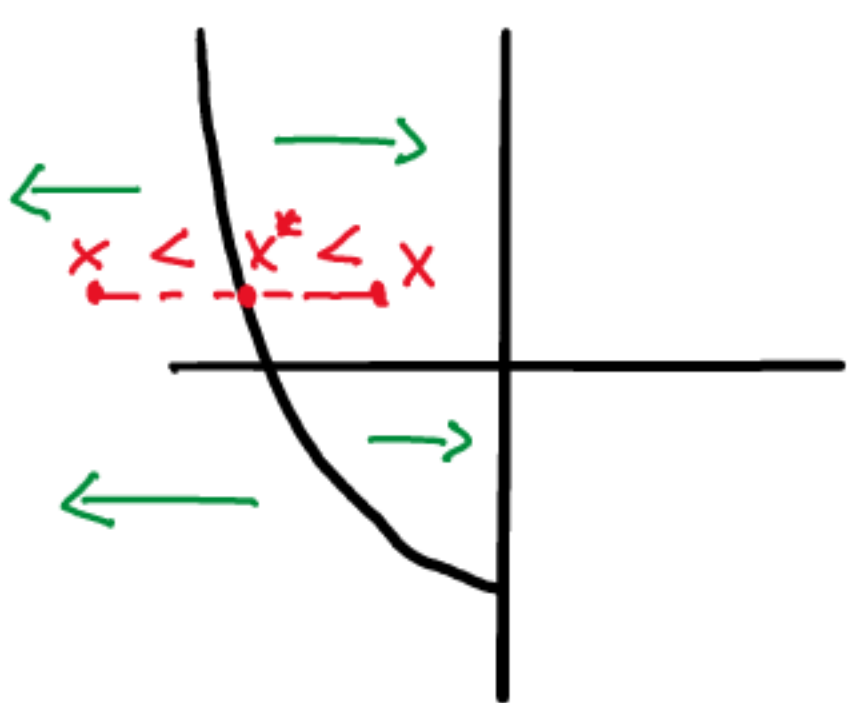
## Paso 1

$$\left. \begin{aligned} \dot{X}=0 &\rightarrow Y = X^2 - 3 \\ \dot{Y}=0 &\rightarrow Y = X - 1 \end{aligned} \right\} \begin{aligned} X_1 &= 2 & X_2 &= -1 \\ \downarrow & & \downarrow & \\ Y_1 &= 1 & Y_2 &= -2 \end{aligned}$$

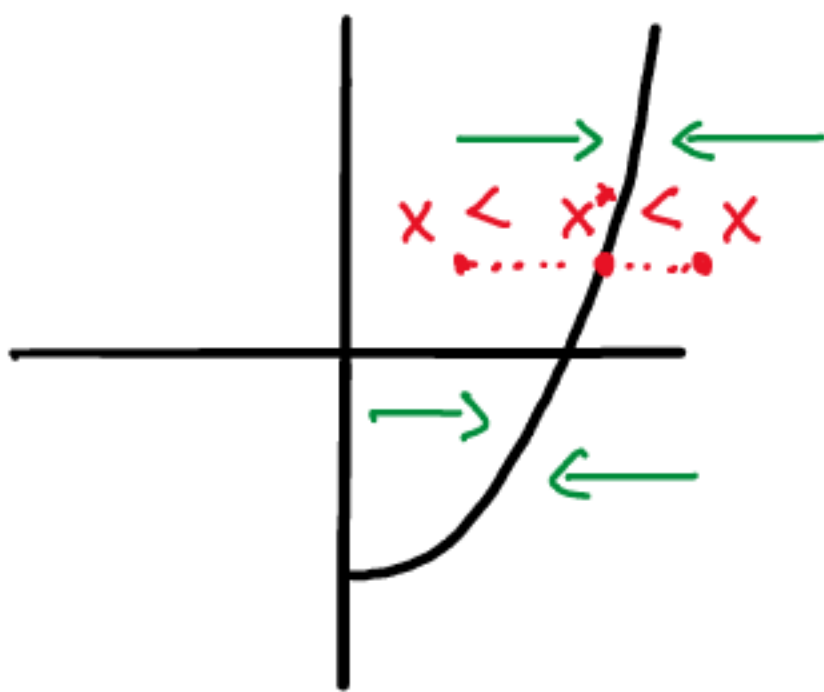
## Teoría

### Paso 2:

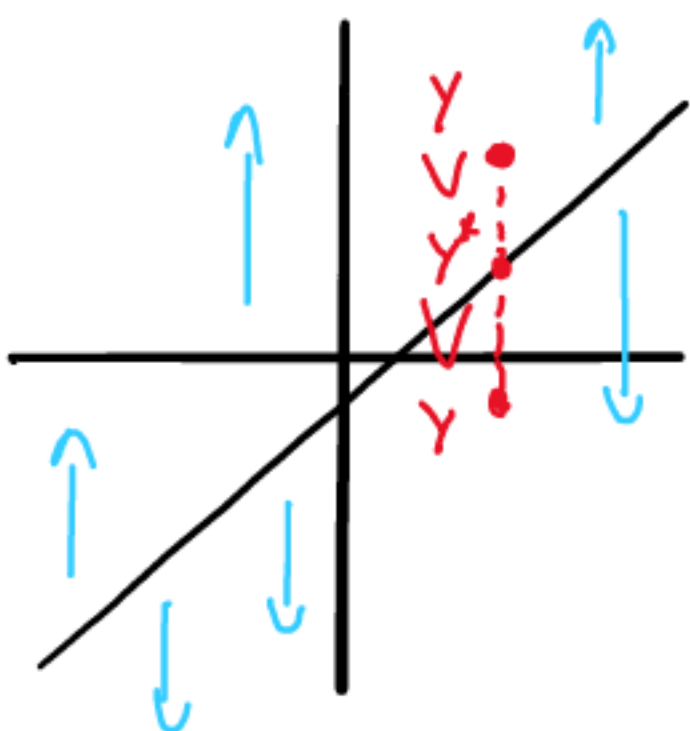
$$\text{Si } X < 0 = \frac{\partial \dot{X}}{\partial X} > 0 \left\{ \begin{aligned} X > X^* &\rightarrow X \rightarrow \\ X < X^* &\rightarrow X \leftarrow \end{aligned} \right.$$



$$\text{Si } X > 0 = \frac{\partial \dot{X}}{\partial X} < 0 \left\{ \begin{aligned} X > X^* &\rightarrow X \leftarrow \\ X < X^* &\rightarrow X \rightarrow \end{aligned} \right.$$



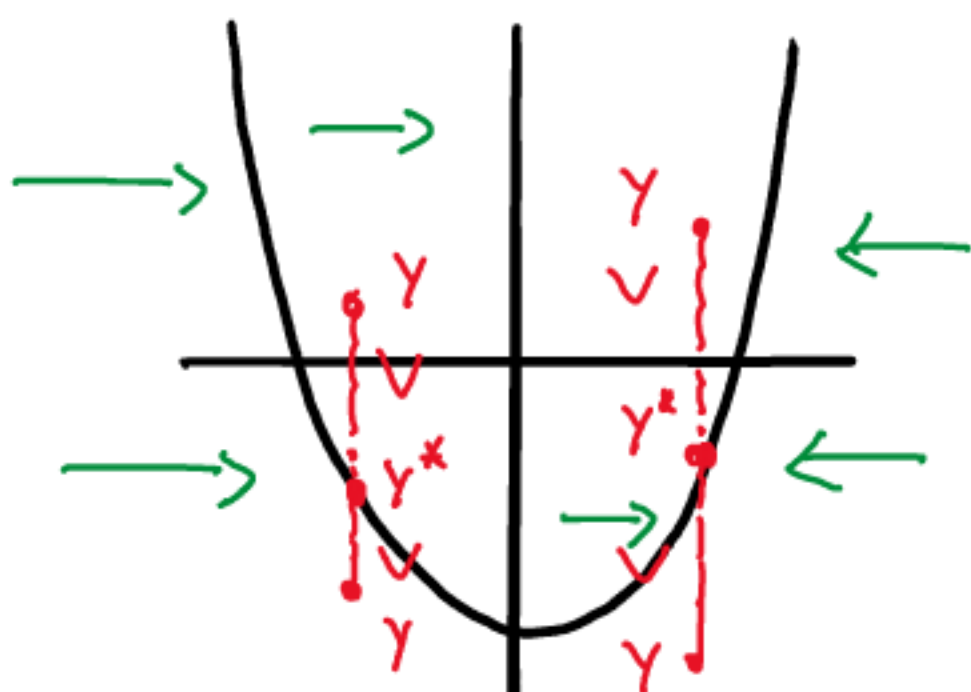
$$\frac{\partial \dot{Y}}{\partial Y} > 1 \left\{ \begin{aligned} Y > Y^* &\rightarrow Y \uparrow \\ Y < Y^* &\rightarrow Y \downarrow \end{aligned} \right.$$



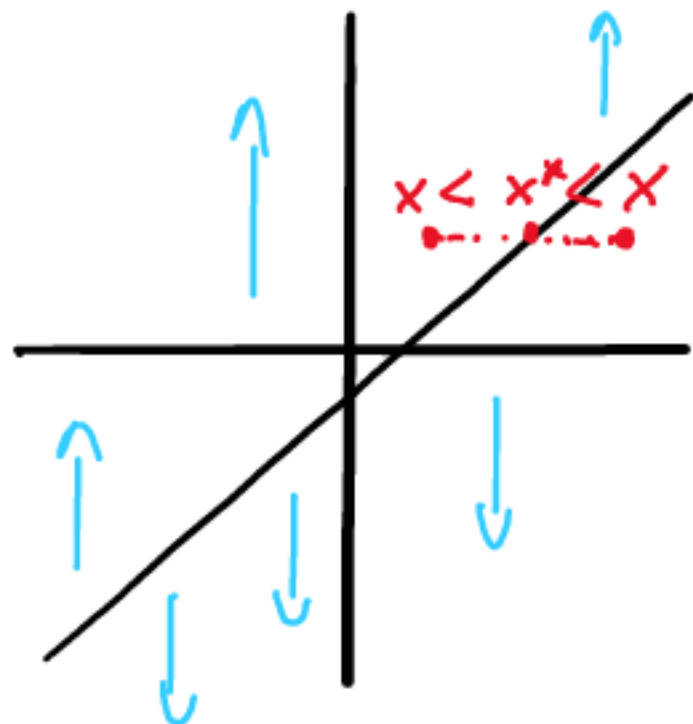
## Práctica

### Paso 2:

$$\frac{\partial \dot{X}}{\partial Y} > 0 \left\{ \begin{aligned} Y > Y^* &\rightarrow X \rightarrow \\ Y < Y^* &\rightarrow X \leftarrow \end{aligned} \right.$$



$$\frac{\partial \dot{Y}}{\partial X} > 1 \left\{ \begin{aligned} X > X^* &\rightarrow Y \uparrow \\ X < X^* &\rightarrow Y \downarrow \end{aligned} \right.$$



## Paso 3

