

Quiz 21

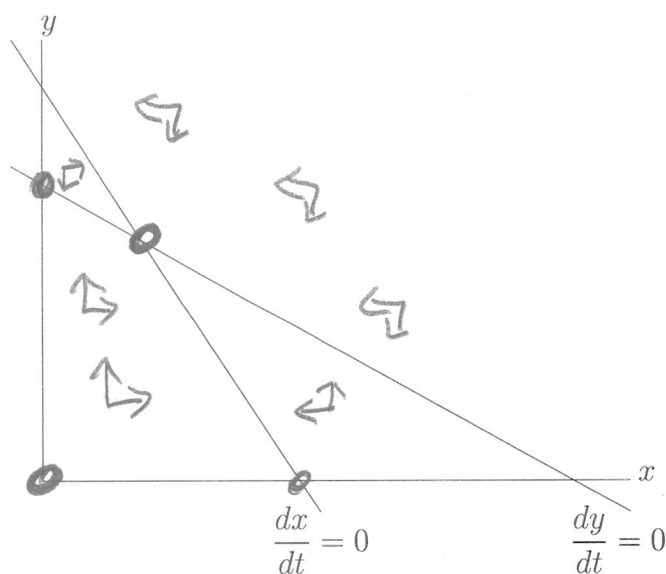
Name: _____

The following are phase diagrams for the equations

$$\frac{dx}{dt} = r_1 \left(\frac{K_1 - x - \alpha y}{K_1} \right)$$

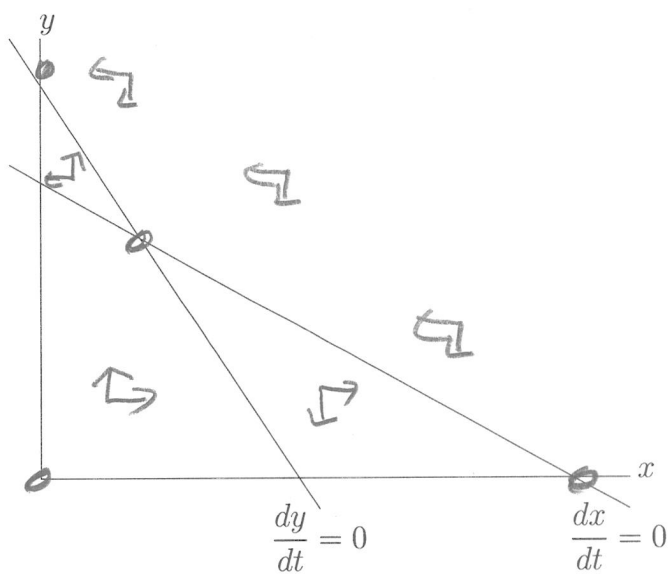
$$\frac{dy}{dt} = r_2 \left(\frac{K_2 - \beta x - y}{K_2} \right)$$

of competing species. In each of the figure label the rest points (or equilibrium points) and put in some arrows in each region showing which way the points (x, y) are moving. Also label as the long term behavior, this is if it is **competitive coexistence** or **competitive exclusion**. In the later case which species dominates.



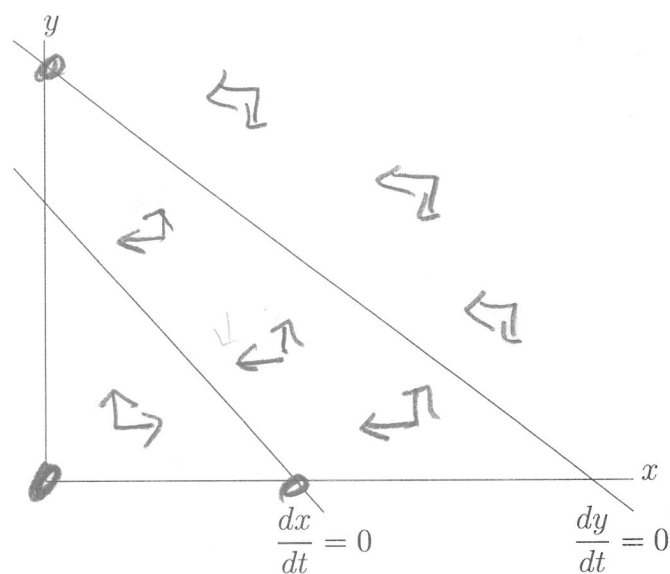
Long term behavior is:

coexistence



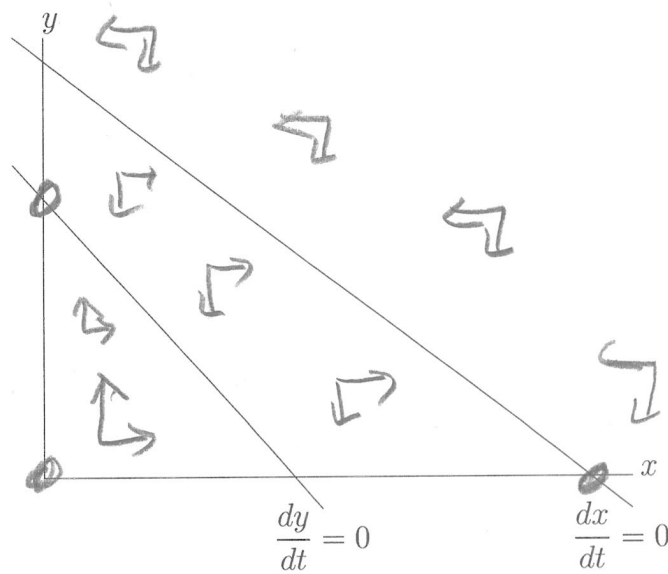
Long term behavior is:

exclusion



Long term behavior is:

y-dominates



Long term behavior is:

x-dominates