

For full credit you must show sufficient work to justify your answer.

- Illustrated below is the phase portrait of a predator-prey system. The point A represents an equilibrium for this system. The initial populations at $t = 0$ start very close to A and follow the trajectory shown. Sketch, as accurately as you can, the time plots for each of the victim population V and the predator population P from $t = 0$ to $t = 8$; make sure it is clear which graph is which. Don't just connect the dots by straight lines; connect them smoothly by estimating what is happening at the in between times. Does this equilibrium appear to be stable or unstable?

