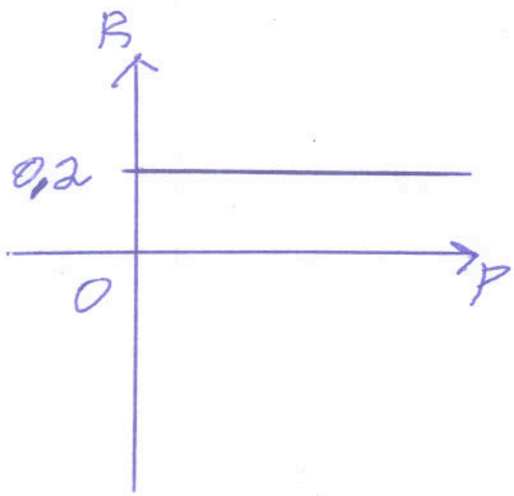
- A population can be modeled by the following discrete dynamical system

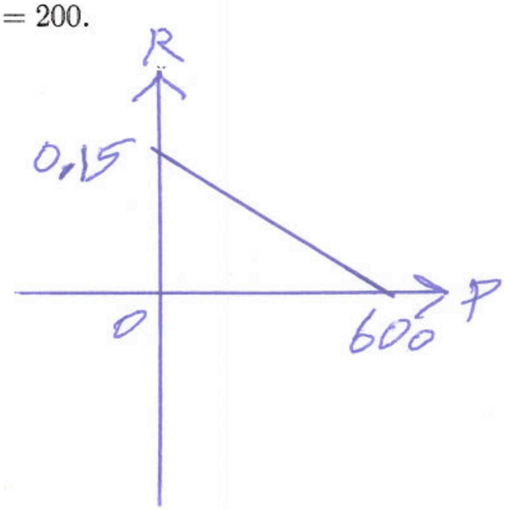
$$P(t) = P(t-1) + R \cdot P(t-1)$$

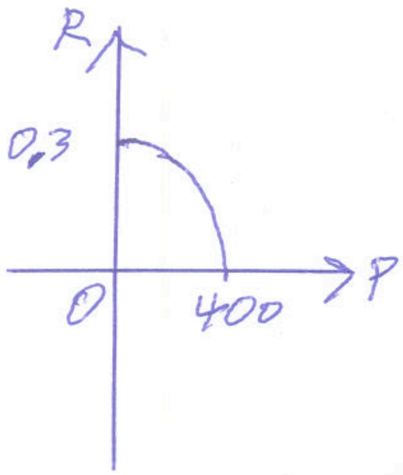
where the growth rate R is a function of the population P.

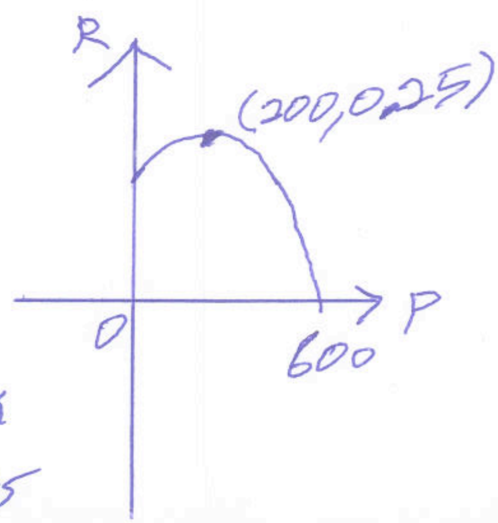
You are given many different graphs of R versus P. For each graph you should

- Determine the intrinsic growth rate for this population.
- Find the carrying capacity for this population.
- Find all equilibrium values for this population.
- Sketch a rough graph of the population as a function of time, being sure to show each equilibrium value clearly and being sure to show what happens to any initial populations which are above or below each positive equilibrium value.
- Determine if there is a minimum viable population.
- Find a formula for R as a function of P.
- Compute the value of $P(10)$ given that $P(0) = 200$.









PARABOLAS