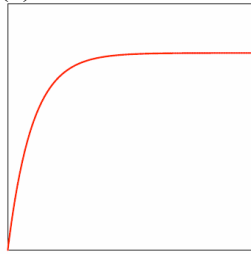


Question 1.

(a)



Time (t)

(b) $P = \sigma/\delta$

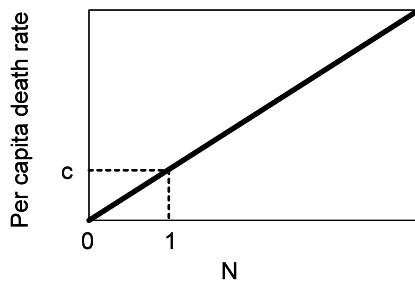
(c) $\ln(2)/\delta$

(d) New steady-state is 2x old. No change in time to reduce pesticide levels by 50%.

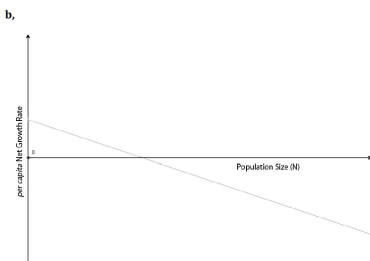
(e) $\ln(2)/50 = 0.01$

Question 2.

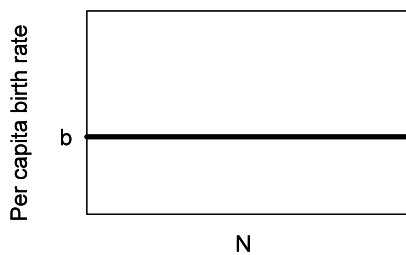
(a)



(b)

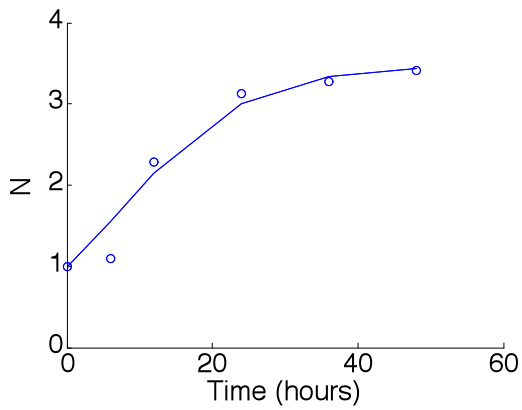


OR (if neglecting the word NET)



(c) $N = 0$ and $N = b/c$

- (d) $N = 0$ is unstable, and $N = b/c$ is stable
(d) Optimal parameters: $b = 0.12$ and $c = 0.03$



OR (if not including time 0 in fit the can get the following because ode45 always returns time 0 as first value -- BUG):

$b = 0.27$ and $d = 0.08$

