

Homework assigned Wednesday, November 10

- (1) For the system of predator-prey equations

$$\frac{dV}{dt} = .01V - .002VP$$

$$\frac{dP}{dt} = -.1P + .001VP$$

- (a) What is the average number of victims?
(b) What is the average number of predators?
(c) If we start with 130 victims and 4 predators, then what happens in the short term? (That is does the number victims/predators increase or decrease.)
- (2) In the last problem, if the death rate $q = .1$ is decreased from $.1$ to $.05$, what happens to the average number of victims and predators?