Homework 7

Chapter 12

1. $\frac{\sigma}{\lambda}$ can be determined in the following way:

determine σ by isolating the predators (so $K=0$) and determining their death rate.

Now, we know the values of $-\sigma$, p, and K in the equation $\frac{dp}{dt} = -\sigma p + \lambda K p$ (Keep K, the prey population, constant)

So we can find the value of λ by observing the change in predator population when the prey population is held constant.

$K = \sigma/\lambda$ is a p null cline, which means we can check this value by setting the K population to be σ/λ and checking that the predator population remains constant.