Mathematics 172 Homework, April 13, 2018.

In the predator-prey system

$$\frac{dx}{dt} = .15x\left(1 - \frac{x}{100}\right) - 2xy$$
$$\frac{dy}{dt} = -5y + .04xy$$

(x is the size of the prey population and y is the size of the predator population). Find the equilibrium points, draw the phase space, and use it to show that in this case the predator dies out. As a hint look at the case of $K < d/\beta$ on page 5 of the last homework.

We have a test coming up next week so this weekend would be a good time to start reviewing. As usual looking at the quizzes is a good way to do this.