Quiz 24

Name: _____

1. Draw a phase plane for the system of DE's below, and indicate the equilibria. Make your picture large and legible! Colors are encouraged. If you do not have colors, please label which nullclines are which.

$$\frac{dx}{dt} = xy + y$$
$$\frac{dy}{dt} = x - 1$$

Solution: solve for the nullclines first: for x nullclines you get $x + 1 = 0$ and $y = 0$. For y nullclines you get $x = 1$. The graph is shown below. There is one equilibrium at $(x, y) = (1, 0)$.