- $(0, 0)$ is unstable so trajectories diverge from it. Both species are extinct at $(0, 0)$ but small initial population causes growth.
- $(0, 4)$ is a stable equilibrium so y survives but x goes extinct. $(1.5, 0)$ is also stable so x survives but y goes extinct.
- $(2, 2)$ is a saddle so both populations can coexist given precise initial conditions. So small perturbations at $(1, 1)$ send either x to extinction ($x \to (0, 4.5)$) or y to extinction ($y \to (1.5, 0)$).