

Predator-Prey (7.4)

For problems **1**,

- a.** Find all critical points.
- b.** For each critical point, find the corresponding linear system.
- c.** Find eigenvalues of each linear system, and determine the stability/instability of each critical point.

Sketch the phase portrait in the first quadrant for problem **1**.

- 1.** $dx/dt = x(1 - 2y), \quad dy/dt = y(-1 + x)$