$$\begin{cases} y' = y(2 - y - 1.125x) \\ x' = x(1.5 - 0.5x - y) \end{cases}$$

$$\frac{y'}{x'} = \frac{2y - y^2 - 1.125xy}{1.5x - 0.5x^2 - xy}$$

$$(2y - y^2 - 1.125xy)dx - (1.5x - 0.5x^2 - xy)dy = 0$$

Denote $\begin{cases} M = 2y - y^2 - 1.125xy \\ N = -1.5x + 0.5x^2 + xy \end{cases}$

$$My = 2 - 2y - 1.125x$$
$$Nx = 1.5 + x + y$$
$$My - Nx = 2 - 2y - 1.125x + 1.5 - x - y \neq 0$$ not exact

Suppose exist a u, s.t. $u(My - Nx) = u(-2.125x - 3y + 3.5)$

$$\frac{u}{My} = \frac{-2.125x - 3y + 3.5}{2 - 2y - 1.125x}$$

or $$\frac{u}{Nx} = \frac{-2.125x - 3y + 3.5}{-1.5 + x + y}$$

No solution.