

Name: Please print your name clearly in all capital letters in the boxes below.

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| FIRST NAME | |
| LAST NAME | |

Quiz 427J

Consider the nonlinear system

$$\begin{aligned}x' &= (x - 1)(y - 2) \\ y' &= xy + 4\end{aligned}$$

- (a) For each equilibrium point, give (i) the equilibrium point, (ii) the linear system at that point, (iii) its eigenvalues, (iv) the real eigenvectors, and (v) the type of phase portrait.
- (b) Graph the phase plane of the nonlinear system.