

coursera

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Phase Portraits

Determine if the fixed points of the following systems are nodes, saddle points, or spirals, and determine their stability.:

(a)
$$\dot{x}_1 = -3x_1 + \sqrt{2x_2}, \quad \dot{x}_2 = \sqrt{2x_1 - 2x_2};$$

(b)
$$\dot{x}_1 = x_1 + x_2, \quad \dot{x}_2 = 4x_1 + x_2;$$

(c)
$$\dot{x}_1 = -rac{1}{2}x_1 + x_2, \quad \dot{x}_2 = -x_1 - rac{1}{2}x_2.$$

✓ Completed

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