

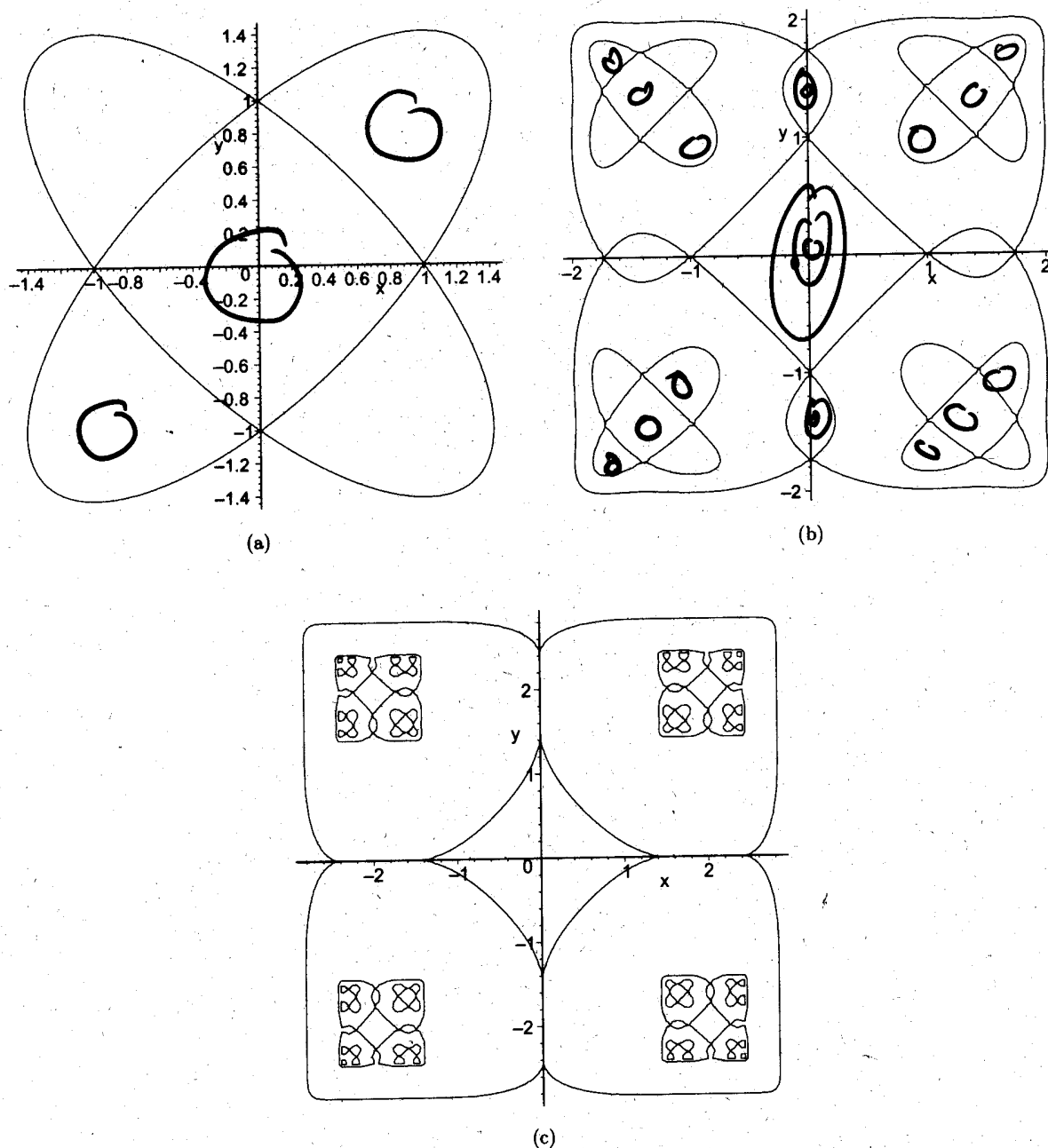


Fig. 20. Copies of a Z_4 -equivariant polynomial Hamiltonian system. (a) A cubic system; (b) a system of degree 7; (c) a system of degree 15.

Suppose that $n = 2^k - 1$. Then $k = \log_2(n + 1) = \ln(n + 1)/\ln 2 \approx (1.442695) \ln(n + 1)$. From (81), we obtain

$$H(n) \geq \frac{1}{4}(n + 1)^2 \left((1.442695) \ln(n + 1) - \frac{13}{6} \right) + n + \frac{2}{3}. \quad (82)$$

Proposition 8.4. *By using the Z_4 -equivariant systems (PH_k) to create limit cycles, where $Q_k(x, y) = 0$ and (PH_2) is (79), we have*

This proposition is the correction of Theorem 3.4 of [Christopher & Lloyd, 1995].