

Exercise(s)

28. 5. 2026

The last exercise is to be handed in at the beginning of the next lecture.

29. Study the dynamics of the general normal form of a Hamiltonian in two degrees of freedom near an equilibrium in 1:3 resonance. How many different cases are there?
30. Compute for the Hamiltonian

$$H(q, p) = \frac{p_1^2 + q_1^2}{2} + 3 \frac{p_2^2 + q_2^2}{2} + 2q_1q_2^2$$

in 1:3 resonance the normal form polynomial of degree 4.