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**Short title:** The quasi-exactly solvable potentials method applied to the three-body problem.

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**Review text:**

Schrödinger equation for one-dimensional ground state or first excited state of three particles of an equal mass is assumed re-arrangeable as a separable differential bound-state problem. Starting from an elementary “suitable” ansatz for the (= single!) wave function, one enters the well known terrain allowing to deduce the original form and parameters of the (two- plus three-body) interactions  $V$ . Three explicit examples (with  $V$ =polynomial, singular or PT-symmetric) are presented. The first-order perturbation results are added, tabulated and numerically cross-checked.