

New Rational Form Solutions to Coupled Nonlinear Wave Equations

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Abstract: The new rational form solutions to the elliptic equation are shown, and then these solutions to the elliptic equation are taken as a transformation and applied to solve nonlinear coupled wave equations. It is shown that more novel kinds of solutions are derived, such as periodic solutions of rational form, solitary wave solutions of rational form, and so on.

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Key words: elliptic equation, Jacobi elliptic function, nonlinear coupled equations, periodic wave solution, rational form

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