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Kink solutions for three new fifth order nonlinear equations. (English) [Zbl 1427.35246]

Summary: In this work we examine three new fifth order nonlinear evolution equations. The simplified form of the Hirota’s direct method is used to derive multiple kink solutions for the first two \((1+1)\)-dimensional equations, and only two soliton solutions for the third \((2+1)\)-dimensional equation. The dispersion relation is the same for the first two equations whereas the third one possesses a different dispersion relation.

MSC:
35Q53 KdV equations (Korteweg-de Vries equations)
35C08 Soliton solutions

Keywords:
simplified Hirota’s method; dispersion relations; kinks

Full Text: DOI

References:

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