

Oscillations in an $x^{(2n+2)/(2n+1)}$ Potential via He's Frequency-Amplitude Formulation

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A recent technique, known as He's frequency-amplitude formulation approach, is proposed in this letter to obtain an analytical approximate periodic solution to a nonlinear oscillator equation with potential of arbitrary fractional order. The solution procedure of the present approach is very simple and more convenient in comparison with the harmonic balance method.

Key words: Nonlinear Oscillators; He's Frequency-Amplitude Formulation; Periodic Solution.