

**COMPARISON BETWEEN TWO INTEGRAL METHODS BY
OBTAINING NEW SOLUTIONS FOR THE 3D EXTENDED
QUANTUM ZAKHAROV-KUZNETSOV EQUATION**

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Abstract

In this paper, we apply two integral methods the first integral and the direct integral methods to study the exact solutions of the three-dimensional extended quantum Zakharov-Kuznetsov (ZK) equation. The application of the first integral has yielded solitary and trigonometric function solutions. Also the application of the direct integration has given the same solutions obtained from the First integral but the direct integral more easy and direct than the first integral.

Key Words : *The three-dimensional extended Zakharov-Kuznetsov equation, First integral method, Direct integral method.*