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Exact peaked wave solution of the osmosis K(2,2) equation

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**Abstract:** By using the first-integral method, an exact peaked wave solution to the K(2,2) equation with osmosis dispersion has been obtained directly. The obtained solution agrees well with the previously known solution in the literature. The first integral method is easier and quicker than other traditional techniques. It is shown that the first integral method is a standard and direct method, which may allow us to solve other more complicated solitary wave problems.

**Key Words:** Peaked wave solutions, the first-integral method, ring theory, K(2,2) equation with osmosis dispersion

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