

**MR2133186 (Review)** 11D41 11D45

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**A note on the Diophantine equation  $D_1x^2 + D_2 = ak^n$ .**

**(English. English summary)**

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(*electronic*).

In this nice, short note the author makes some interesting observations about various Diophantine equations treated by others. For example, he points out that the main result of the paper [M. G. Leu and G.-W. Li, Proc. Amer. Math. Soc. **131** (2003), no. 12, 3643–3645 (*electronic*); MR1998169 (2004d:11020)] is an immediate corollary of the work of W. Ljunggren on the Diophantine equation

$$(y^n - 1)/(y - 1) = x^2.$$

He also points out that the main result of the reviewer's paper [Proc. Amer. Math. Soc. **131** (2003), no. 5, 1339–1345 (*electronic*); MR1949862 (2004c:11041)] follows immediately from the results of Y. Bugeaud and T. N. Shorey [J. Reine Angew. Math. **539** (2001), 55–74; MR1863854 (2002k:11041)]. With respect to the above mentioned work by Bugeaud and Shorey, the author points out two counterexamples to some of the results of that paper. He explains how these counterexamples arose and where the errors of that paper are and corrects them.

In conclusion, this short note is a valuable addition to the literature on the subject.

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