

Problems with a Heart-Shaped Curve

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Abstract. We examine the work of two computer algebra systems on an ordinary differential equation of the first order. Both systems, DERIVE 5 and Maple 8, yield implicit solutions, and both have problems plotting graphs of integral curves (which may be classified as heart-shaped). These problems are even more serious when, in Maple, we deal with the implicit solution, where the Lambert function is involved.

Key words: computer algebra systems, Lambert function