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ON A PROBLEM OF DAVID SINGER ABOUT PRESCRIBING CURVATURE FOR CURVES

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Abstract. Motivated by the classical Euler elastic curves and the Bernoulli's lemniscate, David A. Singer posed in 1999 the problem of determining a plane curve whose curvature is given in terms of its position. The aim of this talk is the analysis of the authors' contribution to the above problem when the curvature is prescribed in terms of the distance to a line.

MSC: 14H50, 53A04, 74H05.

Keywords: Catenary, curvature, cycloid, distance, grim-reaper, plane curves

CONTENTS

1.	Introduction	1
2.	Plane Curves with Curvature Depending On Distance to a Line 10	3
3.	Plane Curves Such That $\kappa(y) = \lambda/y^2 \dots 10$	4
4.	Plane Curves Such That $\kappa(y) = \lambda \cos y$	6
4.	1. Case $K(y) = \lambda \sin y$, $0 < \lambda < 1$	6
4.	2. Case $K(y) = \sin y$	7
4.	3. Case $\mathcal{K}(y) = \lambda \sin y$, $\lambda > 1$	7
5.	Plane Curves Such That $\kappa(y) = \lambda \cosh y$	8
6.	Plane Curves Such That $\kappa(y) = \lambda/e^y$	9
6.	1. Case $\mathcal{K}(y) = c - e^{-y}$, $-1 < c < 1$	9
6.	2. $\mathcal{K}(y) = 1 - e^{-y}$	0
6.	3. $\mathcal{K}(y) = c - e^{-y}, c > 1$	0