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The story of Landen, the hyperbola and the ellipse.

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In der vorliegenden Arbeit geht es um die Bestimmung der Länge von Hyperbelbögen. Zur Lösung der Aufgabe wird eine Idee von J. Landen aus dem 18. Jahrhundert herangezogen. Damit lässt sich die gesuchte Hyperbelbogenlänge schliesslich mit Hilfe einer Ellipsenbogenlänge ausdrücken.

The problem of rectification of conics was a central question of analysis in the 18th century. The global of this note is to describe Landen's work on rectifying the arc of a hyperbola in terms of an ellipse and a circle. Naturally, Landen's language is that of his time, in terms of fluents and fluxions, and his arguments are not rigorous in the modern sense. The main result presented here is a special relation between the length of an ellipse, the length of a hyperbolic segment, and the length of a circle. The proof is based on a generalization of Euler's formula for the lemniscatic curve. (Introduction)

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