Summary in English

Johan Carl-Erik Stén, *Anders Johan Lexell som matematiker* (Swedish)

A short presentation of the Swedish Mathematician Lexell (1740-1784) which can be seen as a trailer to the full biography written by the author. The name of Lexell is now essentially unknown but in his time he was a very respected mathematician who worked closely with Euler during the second and final period of the latter at the Academy at St-Petersburg. In fact Lexell was an eye-witness to Euler's death, and his report thereof in the form of a private letter is added as an appendix. Lexell was precocious and showed his mathematical skill by his solutions of some non-linear ordinary differential equations, a work which impressed Euler. As a further example of his technical skill was his expression of the integral

$$\int \frac{dx}{(1+x)(2x^2-1)^{\frac{1}{4}}}$$

in elementary functions. He was also involved in applied mathematics, notably the determination of the solar parallax in connection with the Venus passage 1769 and was a pioneer treating observational data statistically, thereby obtaining a very good approximation of that parallax. However, his main contributions concern spherical geometry, an example of which is that the locus of the moving vertex of spherical triangles with fixed base and area is a small circle.

Christoph Kirfel, *Dypdykk i ufornuften, irrasjonale tall og det som verre er*(Norwegian).

This is a presentation of irrational numbers starting from the most elementary level suitable for elementary school, to the construction of transcendental numbers in the spirit of Liouville and the proof of the irrationality of e and that of some trigonometric values.

Ulf Persson, *Lexell's theorem*

A short presentation of a simple proof of Lexell's theorem.