

Summary in English

Audun Holme, *Editorial* (Norwegian). The new editor explains his visions for Normat.

Harald Hanche-Olsen, *On the area of curves* (Norwegian). A brief history of spacefilling curves. The article warms up by showing that a curve of finite length has zero area, then notes how Cantor discovered that the unit interval can be put in a one-to-one correspondence with the unit square – albeit not in a continuous way. Peano found a continuous mapping of the unit interval onto the unit square, and Hilbert simplified his construction. Finally, the author explains Osgood’s construction of a simple curve – a Jordan arc – of area arbitrarily close to 1 lying inside the unit square.

Bengt Ulin, *Pappus – a juggler of proportions* (Swedish). The competence of a good mathematics teacher includes the ability of showing instructive and fascinating history. The ancient mathematician Pappus should be given much more attention. As a geometer, he was as ingenious as Archimedes. The aim with the article is to show how Pappus, thanks to brilliance and patience, beautifully extended the arbelos theorems by Archimedes, essentially using analogies and similarity.

Dag Normann, *On possible and apparently impossible programming tasks* (Norwegian). The author discusses the

$P = NP$ problem. Examples of NP problems discussed are “the traveling salesman problem”, “the partition problem”, and a problem related to the “Minesweeper” game. Examples of P problems discussed are the solvability of a finite set of linear equations and the existence of Euler circuits. The paper is non-technical.

Audun Holme, *Lejeune Dirichlet* (Norwegian). A biographical sketch of Lejeune Dirichlet.

Marius Overholt, *Counting in number theory* (Norwegian). The author gives a brief exposition of the most elementary aspects of the divisor problem of Dirichlet. This problem concerns the asymptotic behaviour of the average number of divisors of the integers from 1 to n as n tends to infinity. In 1849 Dirichlet gave a surprisingly good estimate. In this article a weaker version of his result is proved by an argument using the minimum of prerequisites.

Oddvar Iden, *Construction of the regular heptadecagon* (Norwegian).

C. F. Gauss showed that this construction problem leads to four quadratic equations. The author points out that by solving them geometrically (instead of algebraically) one is guided step by step to a construction.