Summary in English

Signe Holm Knudtzon and Johan F. Aarnes, *Morley's heart – playing with a geometric theorem – part 1.* (Norwegian.) The article starts by presenting simple geometric proofs of Morley's famous theorem and its natural generalizations. Trisection of two exterior angles and one interior angle in a triangle will yield an equilateral. This may be done in three ways, thus three distinct equilaterals may be produced. By means of a possibly new geometric criterion, it is shown that six of the vertices of these equilaterals are located on a conic.

Martin Brundin, *Continuity really does not imply differentiability.* (Swedish.) Using elementary calculus, the author gives an example of an everywhere continuous but nowhere differentiable function. A similar example was given by van der Waerden in 1930. This paper is a detailed version, including definitions and theorems needed for the construction of the function.

Christoph Kirfel, *Perfect numbers.* (Norwegian.) The article presents elementary results on perfect numbers, all of them known for years but presented in an intelligible way. Eulers results on both even and odd perfect numbers are given. The author then shows that the number of different prime divisors of an odd perfect number has to be at least 4 and thus there cannot be small odd perfect numbers (below 1 000 000). Then he shows that – roughly speaking – the exponents in the prime decomposition of a perfect number have to be below the largest prime. This result is shown by means of results on geometric series and prime factors in those series. Some upper bounds for the least and the second least prime in a perfect number are given. Kanold and Pomerance's result – there is only a finite number of perfect numbers having a given number of prime devisors – is mentioned. Finally the factor-chain method is explained by an example. A list of known results about perfect number concludes the article.

Peter Lindqvist, *Euler's Beta function and the Schwarz–Christoffel formula for a triangle.* (Swedish.) The author presents a somewhat unusual proof of Euler's formula

$$B(\alpha, 1-\alpha) = \frac{\pi}{\sin(\pi\alpha)}$$

for the Beta function. The proof proceeds via the conformal mapping of a half plane onto a triangle.