Problemen

| Problem Section

Problem A (folklore)

Three gamblers each select a non-negative probability distribution with mean 1. Say these distributions are F, G, H. Then x is sampled from F, y is sampled from G, and z is sampled from H. Biggest number wins. What distributions should the gamblers choose?

Problem B (proposed by Hendrik Lenstra)

For given $m \in \mathbb{Z}_{\geq 3}$, consider the regular m-gon inscribed in the unit circle. We denote the surface of this m-gon by A_m. Suppose m is odd. Prove that $2A_m$ and A_{2m} have the same minimal polynomial.

Problem C (proposed by Nicky Hekster)

Let n be a prime number. Show that there are no groups with exactly n elements of order n. What happens with this statement if n is *not* a prime number?

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