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## Galois groups for one class of equations

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### Abstract

We find recurrent formulas for obtaining minimal polynomials  $p_n(x) \in \mathbb{Z}[x]$  of numbers of the form  $\cos \pi/n$ , where  $n \in \mathbb{N}$ . We demonstrate that Galois groups of these polynomials are commutative. By the same token we give examples of equations of arbitrarily high degrees solvable in radicals. © 2011 World Scientific Publishing Company.

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### Keywords

Chebyshev polynomials, Euler function, Galois group, system of residue