Chebolu, Sunil K.
**What is special about the divisors of 24?** (English) Zbl 1274.97016

Summary: What is an interesting number theoretic characterization of the divisors of 24 among all positive integers? This paper will provide one answer in terms of modular multiplication tables and will give 5 different proofs based on the Chinese remainder theorem, Dirichlet’s theorem on primes in an arithmetic progression, the structure theory of units, the Bertrand-Chebyshev theorem, and its generalisations by Erdős and Ramanujan.

**MSC:**
- 97F60 Number theory (educational aspects)
- 97H40 Groups, rings, fields (educational aspects)
- 11A41 Primes
- 11A07 Congruences; primitive roots; residue systems
- 16U60 Units, groups of units (associative rings and algebras)

**Keywords:**
- modular multiplication tables; Chinese remainder theorem; Dirichlet’s theorem; primes in an arithmetic progression; structure theory of units; diagonal property; cyclic groups; Bertrand-Chebyshev theorem

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