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$a \pmod{p} \leq b \pmod{p}$ for all primes p implies $a = b$. (In English)

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The assertion of the title was conjectured by *P.P.Pálffy*, and *P.Erdős* pointed out that it easily follows from the Sylvester-Schur theorem. Then it was set as a problem in the Hungarian annual mathematics contest for college students. The most elegant solution was given by *M.Szegedy*, and that is what we present here. Theorem. Let a and b be positive integers. If, divided by any prime number, the residue of a is less than or equal to the residue of b , then a and b are equal.

Classification:

11A05 Multiplicative structure of the integers

11A07 Congruences, etc.

Keywords:

divisibility by primes; Sylvester-Schur theorem