

Solution by the proposer

Given any residue $x \pmod{p}$, let $y \equiv (x/p)x^{(p+1)/2m} \pmod{p}$. Clearly, y is a well-defined residue \pmod{p} . We make use of the well-known result: $(x/p) \equiv x^{(p-1)/2} \pmod{p}$. Then

$$y^m \equiv (x/p)^m x^{(p+1)/2} \equiv (x/p)^m x^{(p-1)/2} x \equiv (x/p)^{(m+1)} x \equiv x \pmod{p},$$

since m is odd. We then see that x [an arbitrary residue \pmod{p}] is an m^{th} power \pmod{p} . Q.E.D.

Also solved by L. A. G. Dresel, R. Martin, and H.-J. Seiffert.

Late Acknowledgment: H.-J. Seiffert solved H-563.



The Fibonacci Association



Announcement

TENTH INTERNATIONAL CONFERENCE ON FIBONACCI NUMBERS AND THEIR APPLICATIONS

June 24–June 28, 2002

Northern Arizona University, Flagstaff, Arizona

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LOCAL INFORMATION

For information on local housing, food, tours, etc. please contact:

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CALL FOR PAPERS

The purpose of the conference is to bring together people from all branches of mathematics and science who are interested in Fibonacci numbers, their applications and generalizations, and other special number sequences. For the conference *Proceedings*, manuscripts that include new, unpublished results (or new proofs of known theorems) will be considered. A manuscript should contain an abstract on a separate page. For papers not intended for the *Proceedings*, authors may submit just an abstract, describing new work, published work or work in progress. Papers and abstracts, which should be submitted in duplicate to F.T. Howard at the address below, are due by May 1, 2002. Authors of accepted submissions will be allotted twenty minutes on the conference program. Questions about the conference may be directed to:

Professor F.T. Howard

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