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SYNOPSIS

1 Contributor Profile: Peter Y. Woo

2 Skoliad: No. 107 Robert Bilinski
   - Montmorency Contest 2005-06
   - Concourse Montmorency 2005-06
   - solutions to the 2006 British Columbia Colleges Senior High School Mathematics Contest

8 Mathematical Mayhem Ian VanderBurgh

8 Mayhem Problems: M326–M331
10 Mayhem Solutions: M276–M281
15 Problem of the Month Ian VanderBurgh

18 The Olympiad Corner: No. 267 R.E. Woodrow
   Featuring the Italian Team Selection Text, Pisa 2005; the 11th Form of the Final Round of the XXI Russian Mathematical Olympiad 2004–2005; the Taiwan Mathematical Olympiad 2005; a correction to problem #4 of Category B Belarus Mathematical Olympiad 2002; and readers' solutions to some of the problems from
   - the Hungarian Mathematical Olympiad 2003–2004, Grades 11–12, Round 2 and the Final Round;
   - the Hungarian Mathematical Olympiad 2003–2004 (Specialized Mathematics Classes), Grades 11–12, First Round;
   - the Finnish High School Math Contest 2004, Final Round;

34 Book Reviews John Grant McLoughlin

34 How Euler Did It
   by C. Edward Sandifer
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36 Nonplussed! Mathematical Proof of Implausible Ideas
   by Julian Havil
   Reviewed by Robert D. Poodiack
A Useful Inequality

by Roy Barbara

The author presents and proves a new inequality that turns out to offer an alternative approach to solving a large class of inequalities. When applicable, the method allows reducing a symmetric inequality with three variables to an inequality in just one variable.

Enjoy!

44 Problems: 3281, 3301–3312

This month’s “free sample” is:

3311. Proposed by Michel Bataille, Rouen, France.

Let \( n \) be an integer with \( n \geq 2 \). Suppose that for \( k = 0, 1, \ldots, n - 2 \) we have

\[
\binom{n-2}{k} \equiv (-1)^k(k+1) \quad (\text{mod } n).
\]

Show that \( n \) is a prime.

3311. Proposé par Michel Bataille, Rouen, France.

Soit \( n \) un entier avec \( n \geq 2 \). On suppose que pour \( k = 0, 1, \ldots, n - 2 \) on a

\[
\binom{n-2}{k} \equiv (-1)^k(k+1) \quad (\text{mod } n).
\]

Montrer que \( n \) est un nombre premier.

49 Solutions: 3201–3213