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SYNOPSIS

129 Skoliad: No. 109  Robert Bilinski
- Concours 2006 de Mathématique du secondaire de Columbie Britannique, Ronde Finale Junior partie B
- solutions to the 6th Annual CNU Regional High School Mathematics Contest

136 Mathematical Mayhem  Ian VanderBurgh
136 Mayhem Problems:  M338–M343
138 Mayhem Solutions: M288–M293
144 Problem of the Month  Ian VanderBurgh

147 The Olympiad Corner: No. 269  R.E. Woodrow
Featuring the Hungarian National Olympiad 2004–2005, Specialized Mathematical Classes, First and Final Rounds; Hungarian National Olympiad 2004–2005, Grades 11–12, Second and Final Rounds; Indian Team Selection Test to IMO 2002; the 2004 Kürschák Competition; and readers' solutions to some of the problems from
- the 15th Korean Mathematical Olympiad;
- the 21st Balkan Mathematical Olympiad 2004;
- the 14th Japanese Mathematical Olympiad;
- selected problems from the Thai Mathematical Olympiad 2003.

161 Book Reviews  John Grant McLoughlin
161 The Magic Numbers of the Professor
   by Owen O'Shea and Underwood Dudley
   Reviewed by Jeff Hooper
163 Geometric Puzzle Design
   by Stewart Coffin
   Reviewed by Jim Totten
164 *The Liar Paradox and the Towers of Hanoi: the Ten Greatest Math Puzzles of All Time*
by Marcel Danesi
Reviewed by Amar Sodhi

165 *Industrial Grade primes with a Money-Back Guarantee*
by Michael P. Abramson

From the Abstract:

A subset of the integers is exhibited for which the converse of Fermat’s Little Theorem holds. Strong evidence is given that this set contains infinitely many primes, though a proof of this is known to be very hard.

Enjoy!!

170 Problems: 3326–3337

This month’s “free sample” is:

3329. *Proposed by Arkady Alt, San Jose, CA, USA.*

Let $r$ be a real number, $0 < r \leq 1$, and let $x$, $y$, and $z$ be positive real numbers such that $xyz = r^3$. Prove that

$$\frac{1}{\sqrt{1 + x^2}} + \frac{1}{\sqrt{1 + y^2}} + \frac{1}{\sqrt{1 + z^2}} \leq \frac{3}{\sqrt{1 + r^2}}.$$

3329. *Proposé par Arkady Alt, San José, CA, É.-U.*

Soit $r$ un nombre réel, $0 < r \leq 1$, et soit $x$, $y$ et $z$ trois nombres réels positifs tels que $xyz = r^3$. Montrer que

$$\frac{1}{\sqrt{1 + x^2}} + \frac{1}{\sqrt{1 + y^2}} + \frac{1}{\sqrt{1 + z^2}} \leq \frac{3}{\sqrt{1 + r^2}}.$$

176 Solutions: 3226, 3228–3238, 3242