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- 21st Transylvanian Hungarian Mathematical Competition, 2011, Selected problems for the 9<sup>th</sup> form
- Solutions to questions of the British Columbia Secondary School Mathematics Contest, 2010, Junior Final Round

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210 Olympiad Corner Problems:    OC11–OC20

In this *Corner* are solutions from readers to some problems from

- II International Zhautykov Olympiad in Mathematics
- 50<sup>th</sup> Mathematical Olympiad of the Republic of Moldova
- Republic of Moldova Mathematical Olympiad Second and Third Team Selection Tests
- Russian Mathematical Olympiad, 2007, 11<sup>th</sup> Grade
- XV Olimpiáda Matemática Rioplatense, Nivel 2
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232 Book Reviews    *Amar Sodhi*

- 232 *Icons of Mathematics: An Exploration of Twenty Key Images*  
by Claudi Alsina and Roger B. Nelsen  
Reviewed by Edward J. Barbeau

234 Problems: 3638–3650

This month's "free sample" is:

**3640.** *Proposé par Roy Barbara, Université Libanaise, Fanar, Liban.*

On considère la fonction  $f(x) = -\sqrt[3]{4x^6 + 6x^3 + 3}$ .

- (a) Trouver les points fixes de  $f(x)$ , s'il y en a.
- (b) Trouver les points périodiques de période **2** de  $f(x)$ , s'il y en a.
- (c) Montrer que  $x = -1$  est l'unique nombre réel tel que  $x$  et  $f(x)$  sont tous deux des entiers.

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**3640.** *Proposed by Roy Barbara, Lebanese University, Fanar, Lebanon.*

Consider the function  $f(x) = -\sqrt[3]{4x^6 + 6x^3 + 3}$ .

- (a) Find the fixed points of  $f(x)$ , if any.
- (b) Find the periodic points with period **2** of  $f(x)$ , if any.
- (c) Prove that  $x = -1$  is the unique real number such that  $x$  and  $f(x)$  are both integers.

240 Solutions: 3526, 3539–3550