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SYNOPSIS

215 Editorial    Shawn Godin

216 Mathematical Mayhem    Shawn Godin
    Solutions to Mayhem problems M495–M500 are presented.

222 The Contest Corner: No. 6    Shawn Godin

224 The Olympiad Corner: No. 304    Nicolae Strungaru

224 The Olympiad Corner Problems: OC86–OC90
226 The Olympiad Corner Solutions: OC26–OC30

232 Book Reviews    Amar Sodhi

232     A Wealth of Numbers: An Anthology of 500 Years of Popular Mathematics Writing
    Edited by Benjamin Wardhaugh

233     The Irrationals: a Story of the Numbers You Can’t Count On
    by Julian Havil

235 Problem Solvers Toolkit: No. 1    Shawn Godin

    This new column will focus on theorems and methods that will be useful to problem solvers. In this first column, Fermat’s Little Theorem is explored.

238 Recurring Crux Configurations 7 :    J. Chris Fisher

    This new, occasionally appearing column, highlights situations that reappear in Crux problems. In this issue problem editor J. Chris Fisher examines triangles which satisfy $B = 2C$. 
Des demi cercles avec centres $O_1$ et $O_2$ sont tracés à partir des cordes $AB$ et $CD$ d’un certain cercle $\Gamma$, ces demi cercles étant tangents au point $T$. La ligne passant par $O_1$ et $O_2$ intersecte $\Gamma$ aux points $E$ et $F$. Si $O_1A = a$, $O_2C = b$, $O_1E = x$ et $O_2F = y$, démontrer que $a - b = x - y$. 

Semi-circles with centres $O_1$ and $O_2$ are drawn on chords $AB$ and $CD$ of a circle $\Gamma$ such that they are tangent at $T$. The line through $O_1$ and $O_2$ intersects $\Gamma$ at $E$ and $F$. If $O_1A = a$, $O_2C = b$, $O_1E = x$ and $O_2F = y$, show that $a - b = x - y$. 

This month’s “free sample” is:

**3753. Proposed by Abdilkadir Altintaş, mathematics teacher, Emirdağ, Turkey.**

Semi-circles with centres $O_1$ and $O_2$ are drawn on chords $AB$ and $CD$ of a circle $\Gamma$ such that they are tangent at $T$. The line through $O_1$ and $O_2$ intersects $\Gamma$ at $E$ and $F$. If $O_1A = a$, $O_2C = b$, $O_1E = x$ and $O_2F = y$, show that $a - b = x - y$. 

245 Solutions: 3651–3660