

## LATIN SQUARE WORD PUZZLES

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*Professor Knuth supplied these three unusual puzzles that he had handed out to participants at the International Puzzle Party (IPP) held at San Francisco in August 2009. He dedicates the puzzles to the memory of Nob Yoshigahara. Solutions will be provided in the next issue.*

A latin square is an array in which every row and every column contains exactly the same letters. Complete the arrays below to latin squares in which the bottom rows each contain a common English word.

(a)

P				
			X	
		I		
	M		P	
M				P

(b)

			X		
		I	P	X	
	M	P	I		
M	I	X			
	X				I

(c)

I	X					M
M	P	X				
	M	P	I			
		I		X		E
			X			
P						