Pi Mu Epsilon
Problem of the Month
November 2008

Fill in the grid with the integers 1 through 49 that satisfy the list of statements given. You must give some justification for your work.

1. Each integer 1 through 49 appears exactly one time in the grid.
2. The sum of each of the seven rows, seven columns, and one diagonal is 175.
3. PP is twice G, 4 times LL, half of BB, and one third of II.
4. WW, W, Q, VV, BB, P, QQ is an increasing sequence of consecutive even numbers.
5. D, J, JJ ,E, K, EE, A is a decreasing sequence of consecutive odd numbers.
6. Y is half of Q and twice N.
7. CC is half of OO, one third of E, and one fourth of V.
8. HH is half of KK, one third of R, one fourth of X, and one fifth of L.
9. S and UU are perfect squares.
10. RR is one half of QQ and twice S.
11. SS is twice TT.
12. S, KK, CC is an increasing sequence of consecutive numbers.

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U
V	W	X	Y	Z	AA	BB
CC	DD	EE	FF	GG	HH	II
JJ	KK	LL	MM	NN	OO	PP
QQ	RR	SS	TT	UU	VV	WW

Problem of the Month Rules:

- Submissions **must** include a complete mathematical justification along with the answer. Please include the steps for how you arrived at the first ten numbers in the puzzle.
- Submissions may only be made by individuals or groups of two and must be dated.
- Submissions for this problem are due before 5 p.m. on November 25, 2008; they may be given to Dr. Leigh Lunsford (Ruffner 331), Dr. Phillip Poplin (Ruffner 335), or Dr. David Shoenthal (Ruffner 344).

For more information or to get a copy of this puzzle, please visit the
Pi Mu Epsilon Problem of the Month website:
http://www.longwood.edu/staff/shoenthaldw/potm.html