AEIOU(Y) EQUATIONS

SUSAN THORPE
Great Missenden, Buckinghamshire, England
thorpeds@hotmail.com

A survey of Word Ways, from its inception in 1968 to the present day, would perhaps give the impression that its contributors have virtually exhausted the exercises centred on the vowels A, E, I, O, U (and Y). Somehow I doubt that. What I can't recall seeing (have I missed it?) is something so obvious that it could well have been overlooked. To me it is quite surprising, and so simple. If we assign A=1, B=2 through Z=26, then:

A + E + I = O and A + E + O = U

AEIOU

It is possible to construct a significant number of vowel equations some of which use all five vowels. These last include the crème de la crème of the vowel equations, those which use each of the five vowels just once - in alphabetical order and in reverse alphabetical order. Further, by juggling the individual elements of certain equations, 'alphabetical order' equations can be transformed into 'reverse alphabetical order' equations with different combinations of vowels on the two sides of the equations. These equation pairs are identified by superscript numbers.

5 vowels in alphabetical order — **5 vowels in reverse alphabetical order**

Suppose, initially, we confine ourselves to equations which only require a selection of the four main functions (+, -, x, and / representing 'divided by').

5 vowels in alphabetical order	5 vowels in reverse alphabetical order
none found	U + O = I x (E - A)
	(U + O) / I = E - A

Now let us add a fifth function in the shape of √ (square root):

5 vowels in alphabetical order	5 vowels in reverse alphabetical order
none found	U = O + [√I x √(E - A)]

Finally, we add ! (the factorial function). Used in association with the square root function, ! usefully converts I (9) into a 6: √9 = 3, and 3! = 3 x 2 x 1 = 6.

5 vowels in alphabetical order	5 vowels in reverse alphabetical order
(A + E) x (√I)! = O + U [1]	(U + O) / (√I)! = E + A [1]
√[(A + E) x (√I)!] + O = U [2]	U - O = √[(√I)! x (E + A)] [2]

AEIOU and Y

Not forgetting the '6th vowel' Y, these equations use the six vowels in alphabetical order (AEIOUY) and reverse alphabetical order (YUOIEA). All of them incorporate the √ function in addition to two or more of the four main functions. 14 of the 16 equations use the configuration (√I)! = 6.

6 vowels in alphabetical order	6 vowels in reverse alphabetical order
A - E + √I = O - U + √Y [3]	√Y = U - O + √I - E + A [3]
(A x E) + (√I)! = O + U - Y [4]	Y = U + O - (√I)! - (E x A) [4]
A = [E + (√I)! + O] / (U + √Y)	Y = U + [O – (√I)! - E] x A
A x E = (√I)! - √(O + U) + √Y	√Y = √(U + O) - (√I)! + (E x A)
(A + E) / (√I)! = √(O + U) - √Y	Y - U = [O - (√I)! - E] x A
A + [E x (√I)!] - O = U - √Y	√Y x U = O x (√I + E - A)
(A x E) + (√I)! - √(O + U) = √Y	√Y + U - O = [(√I)! + E] x A
	√Y x √(U + O) = (√I)! x (E x A)
	√Y + √(U + O) - √(I)! = E x A