

Surveying the Hoard by Pandiculator

All entries are distinct and none starts with zero. Factors and multiples are non-trivial and clued arithmetic progressions have non-zero common differences. Instructions are encoded within sets of entries:

$\alpha=\{b, h, A, G, M, W, Z\}$, $\beta=\{h, z, Q, S, W, X, Z\}$, $\gamma=\{n, p, z, C, E, P\}$, $\delta=\{k, p, F\}$, $\epsilon=\{m, n, t, x, W\}$.

To decode, calculate the product of the set's entries and translate each pair of its digits modulo r as $A=1$, $B=2$, etc. For example, if r were 22, decoding a set $\{713, 966\}$ would give BUN, since the product of 42 and 713 is 688758, whose pairs, modulo 22, are 02, 21, and 14. Set α states how certain cells should be presented and which cells these are. Set β states what the resulting grid represents, while γ contains an instruction to improve the representation. Finally, one digit must be replaced with an object δ in position described by ϵ .

	1	2	3	4	5	6	7	8	9			
	<i>a</i>	<i>b</i>	A	<i>c</i>	B	<i>d</i>	<i>e</i>	C	<i>f</i>	<i>g</i>	A	
D			E	<i>h</i>			F		G		B	
H				K		<i>k</i>	L	<i>l</i>		<i>m</i>	<i>n</i>	C
M	<i>p</i>		<i>q</i>		N	<i>r</i>		P	<i>s</i>			D
		Q		<i>t</i>		R		<i>u</i>	S		<i>v</i>	E
T		<i>w</i>	U		<i>x</i>	V	<i>y</i>			W		F
X				Y		Z						G

ACROSS

- A Fibonacci (2)
- B $n - a$ (2)
- C prime (3)
- D factor of F (2)
- E Prime, anagram of a power of 2 (3)
- F has digit sum that is a factor of f (2)
- G sum of squares of digits of g (2)
- H palindrome (3)
- K square (2)
- L double a cube (3)
- M one more than a multiple of D (3)
- N same digit product as k (3)
- P multiple of the digit product of t (3)
- Q composite (3)
- R has same digit product as V (2)
- S prime, less than V (3)
- T prime (2)
- U square (2)
- V mean of a pair of twin primes (3)
- W prime, $U + z$ (2)
- X prime with digit product 5w (3)
- Y greater than a (2)
- Z greater than U, same digit sum as E (2)

DOWN

- a* anagram of G (2)
- b* has prime digit sum, is one more than another entry (3)
- c* each digit greater than or equal to the previous (3)
- d* composite (2)
- e* has composite digit sum (2)
- f* palindrome with square digit sum (3)
- g* divisible by its digit sum (2)
- h* $M + z - X$ (3)
- k* 2T (3)
- l* triangular (2)
- m* $t - 2U$ (2)
- n* prime whose reverse is prime (2)
- p* prime with square digit sum (2)
- q* has digit product g (2)
- r* factor of e (2)
- s* digits form an arithmetic progression (3)
- t* prime, strictly increasing (3)
- u* digits form an arithmetic progression (3)
- v* $2az - 5W$ (3)
- w* anagram of T (2)
- x* prime (2)
- y* digit product of x (2)
- z* prime, anagram of W (2)