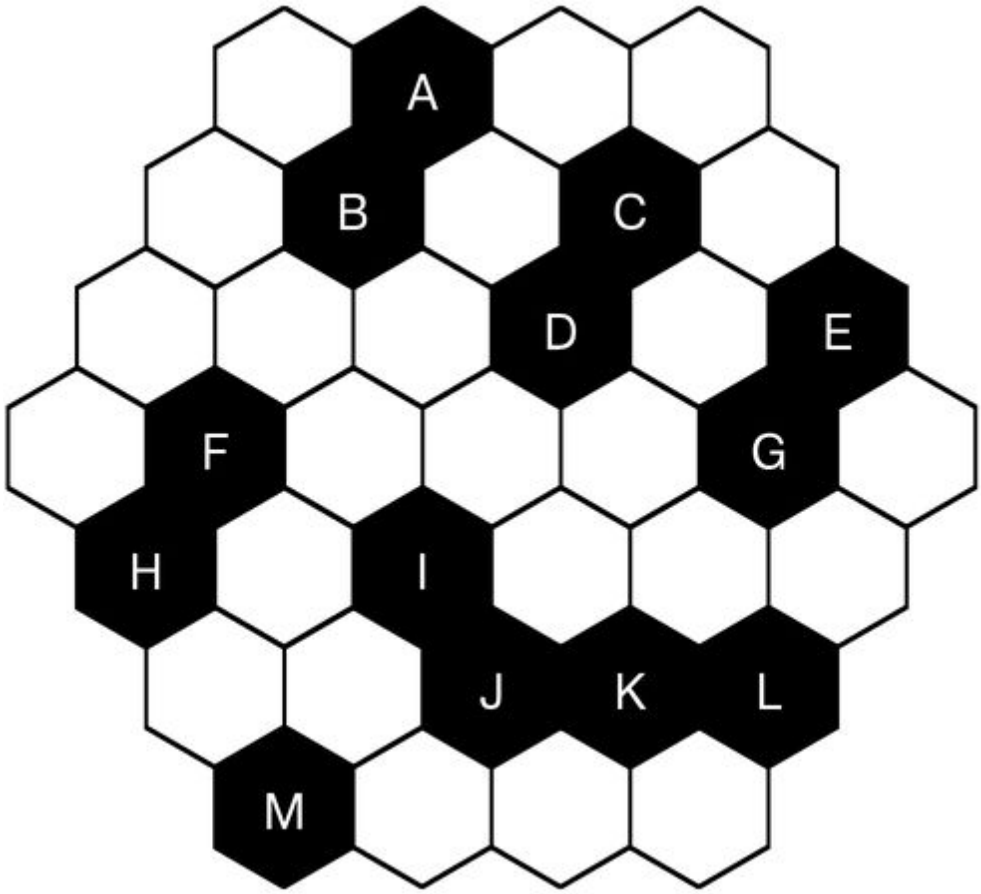
Conqueror 3

Rules

Look at the hexagonal grid overleaf which has two types of cells - clues (black) and answers (empty). Your job is to use the clues provided to fill in the answers according to these rules:

- Every answer must be a whole number between 1 and 50 (inclusive) and no number appears more than once. Since there are fewer than 50 answers, not every number from 1 to 50 will appear, and the smallest and largest number that appear may not be 1 and 50.
- Each clue is a reference to all of the answers adjacent to it, i.e. the empty cells touching it. Some clues may reference other clue cells. When a clue cell is referenced by another clue it will appear in bold underline, e.g. **A**
- The solution to the puzzle is unique; i.e. there is precisely one possible solution
- Here are some examples:
    - If clue A is "Sum is 36. All prime" this means that all of the answers adjacent to clue A sum to 36 and that they are all prime numbers.
    - Then if clue B is "Sum is 2 or 3 times **A**" This means that the answers adjacent to clue B sum to 2 or 3 times whatever the sum of the answers adjacent to A. In this case we know this is 36, so the answers adjacent to 2 add up to either 72 or 108.

WARNING: This puzzle is difficult! To complete it a solver will need to have good maths skills and be very persistent. Knowing about prime factorisation is essential, and knowledge of modular arithmetic is helpful. A pen and extra paper is advised.



Clues

A. There are no other entries in the whole grid that are 1 away from any of these
B. The product ends in 7 0s
C. Consecutive multiples of 6
D. Sums to twice the sum at **H**
E. Sums to (sum at **M**)*11/9
F. The product is half a cube
G. All end in a 1 or 2
H. The only single digit entry in the whole grid and two multiples of it. The single digit entry is not 1
I. All 1 away from a multiple of 5. Sums to an even number
J. Sums to one of 109, 119 or 129
K. When written directly next to each other in ascending order, a palindromic sequence of digits is the result
L. All $\leq$10 apart
M. Consecutive