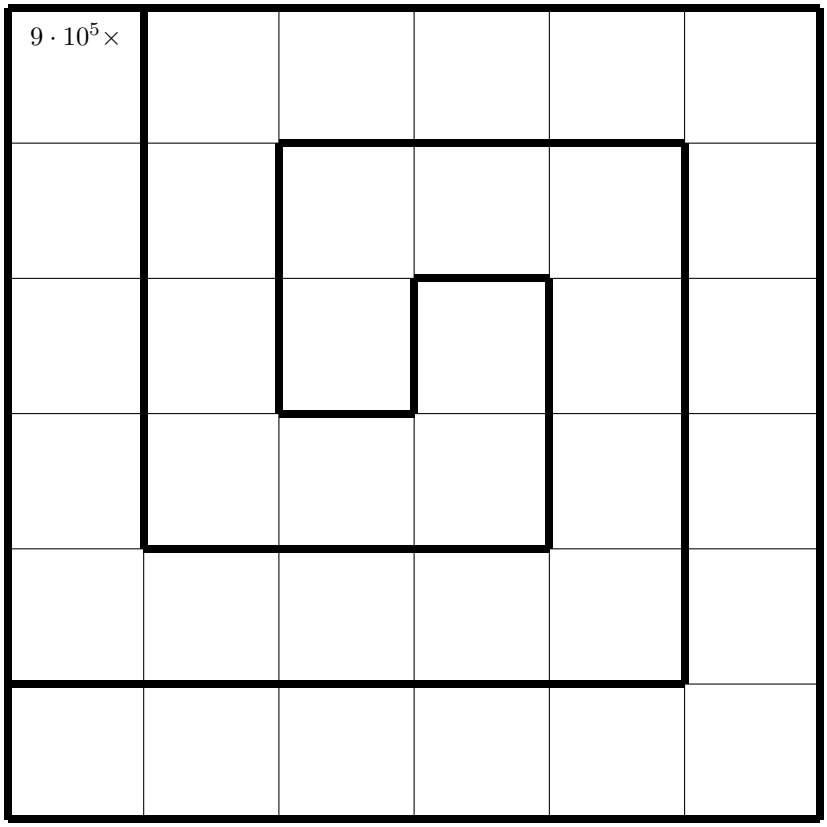
In the standard puzzle KenKen, the numbers in each heavily outlined set of squares, called *cages*, must combine (in any order) to produce the *target number* in the top corner of the cage using the mathematical operation indicated. A number can be repeated within a cage as long as it is not in the same row or column. The $6\times6$ KenKen® puzzle below has only one clue. Yet it has a unique solution. Use the digits 1 through 6 to solve the problem. Find the sum of the four corner numbers.




Related problems.

1. Now replace the number $9 \cdot 10^5$ with another number $k$ so that the puzzle has exactly two solutions.

2. Find some other values of $k$ for which we get a unique solution.

3. Find a number $K$ such that replacing the clue $9 \cdot 10^5\times$ with the clue $K+$ also yields a unique solution.

4. Find a number $K$ such that replacing the clue $9 \cdot 10^5\times$ with the clue $K+$ also yields a puzzle with exactly five solutions.