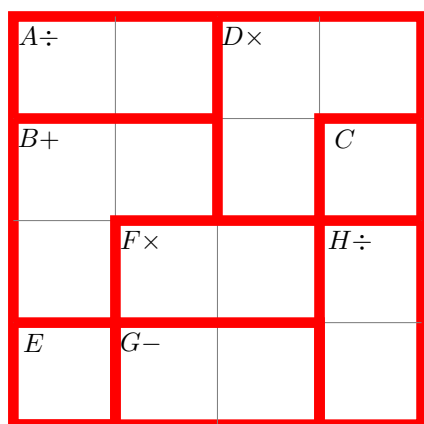


Problem of the Block

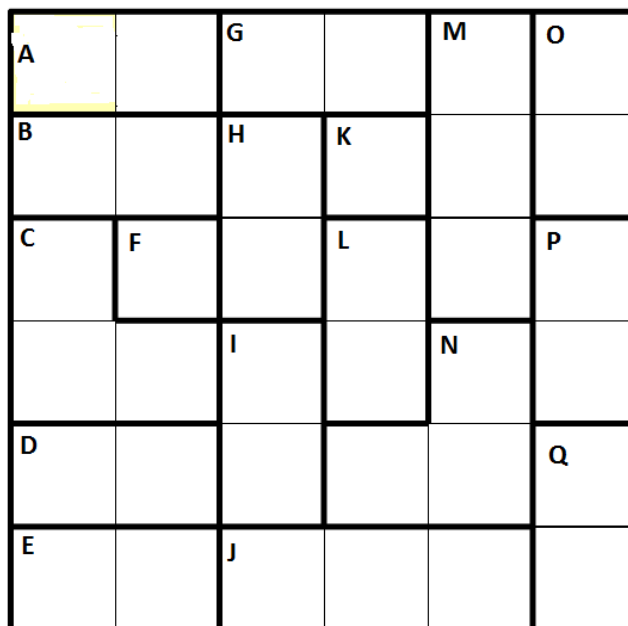
kenken

To complete a kenken puzzle the following must be true:

1. The numbers 1 to 4 (1 to 6 for the 6 by 6 puzzle) must appear once and only once in each row and column of the puzzle.
2. The numbers in the outlined areas, called cages, must combine (in any order) to produce the target number in the top corner using the mathematical operation indicated.
3. Cages with just one square should be filled in with the target number in the top corner.
4. A number can be repeated in a cage as long as it is not in the same row or column.



- A is the smallest prime
- B is the third triangular number
- $C = 100$ in base 2
- $D = \frac{5!}{10}$
- $E = 8^{2/3}$
- F is the number whose prime factorization is $2^2 3$
- $G = \frac{720}{6!}$
- $H = \sqrt{4}$



- $A\sqrt{121}$ (+)
- B is the multiplicative identity (-)
- C is the number of eggs that is one short a dozen (+)
- $D = 1$ (-)
- $E = 1$ (-)
- $F = 2^0$
- G is the first odd prime (\div)
- $H = 6 \pmod{5}$ (-)
- I is the number of cards in a set in poker. (\div)
- J is the number of seconds in a minute (\times)
- $K = 6$
- $L = 10$ in base 2 (\div)
- M is the value of a touchdown in American football (\times)
- N is the value of two tries and one conversion in rugby (+)
- O is the only even prime (\div)
- $P = \log_3 81$ (-)
- $Q = \ln(e^2)$ (\div)

Turn in solutions to Dr. Skorczewski in Law 204 or by email at tskorczewski@cornellcollege.edu by April 16. Multiple solutions are allowed and partial solutions will receive credit (and are encouraged!). Submitting solutions to the Problem of the Block may earn culture points toward the math major. For more information about the Problem of the Block and to print off your own copy visit <http://www.cornellcollege.edu/mathematics/problem-of-the-block/index.shtml>.