

Four Fours

Express all the numbers from 1–100 using an arithmetic combination of only four 4's?

You can use:

The four operations (+, −, ×, ÷)

Brackets ()

Multiple digits e.g. 44

Decimal points e.g. 4.4

Powers e.g. 4

Square Roots

Factorials e.g. 4!

Example:

$$1 = (4 \div 4) \div (4 \div 4)$$

All the numbers less than 113 can be constructed in this way.

69 and 73 are the most difficult to express in four 4's and require several combinations of the operations shown above.

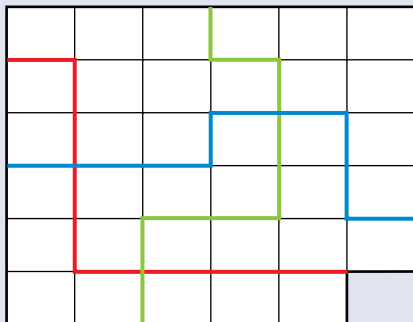
Good Luck!!

Cut The Cake

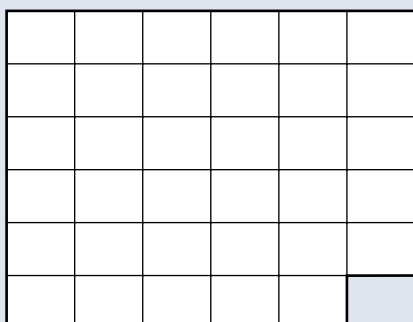
A square cake with a corner missing can be cut into

7 *unequally* sized pieces with 3 cuts, following the gridlines.

None of the cuts cross themselves, and each crosses the other cuts exactly once.



Following these rules, see if you can cut the cake into **7 *equally*** sized pieces.



There are two possible solutions to this problem. Have Fun!