

Brian's Puzzle of the Week: 12



You are standing in front of a building with 100 levels, and you are given two glass marbles.

If you drop a glass marble out of the window on level 100, it will break.

Your job is to determine the *lowest level* at which a glass marble will break if dropped out of the window.



The simple-minded method is to drop a marble first from level 1, then from level 2, and so on, testing each level until the marble breaks.

This method will require a maximum of 99 tests.

Since you have two marbles, you can use a more efficient method. (If one marble breaks, you can continue working with the other.)

Find the most efficient method for using the two marbles to determine the lowest breaking-level.

(In other words, find the method that has the smallest possible *maximum number of tests*. What is this number?)