13. Recursion

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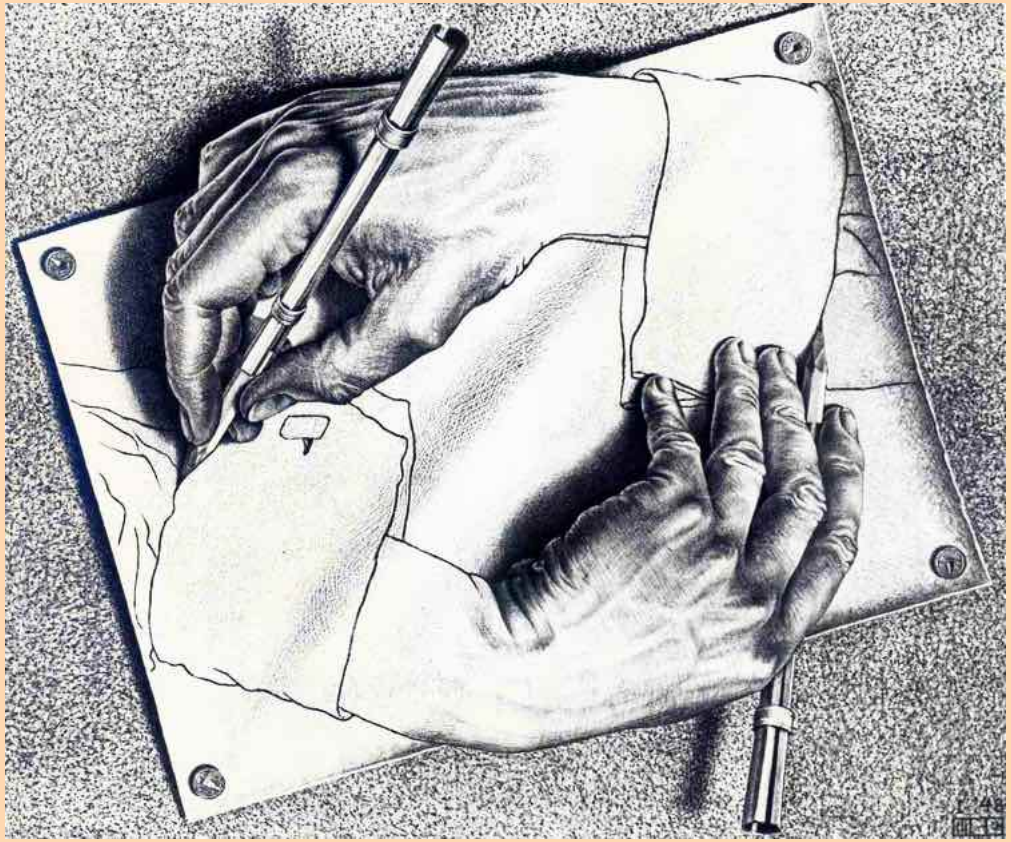
Recursive Functions (Recursion)



A function that calls itself (min-re.c).

(1) Thinking like a Computer Scientist

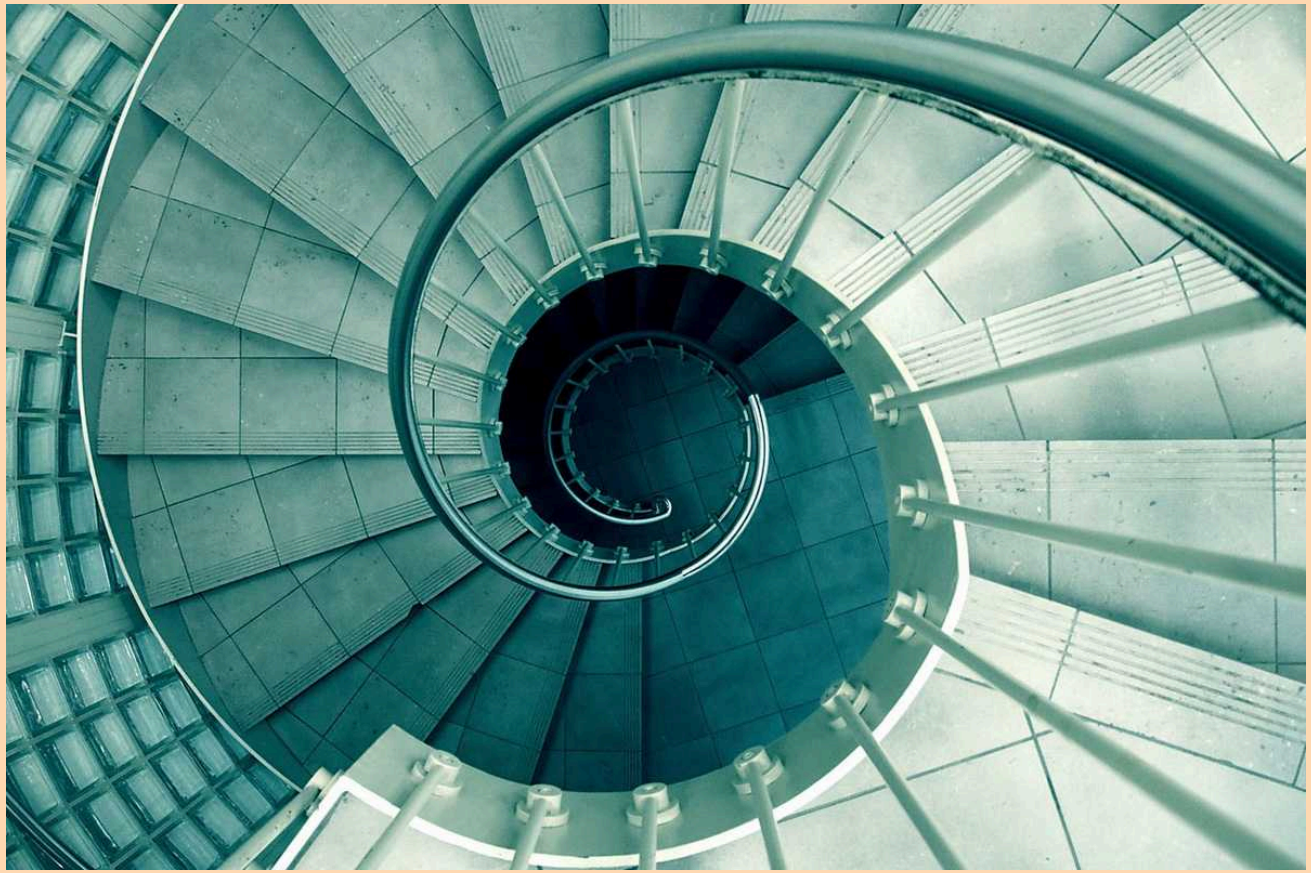
You have a problem and suppose you have the Mirror.

The Mirror can solve smaller sub-problems for you magically.

(1) Thinking like a Computer Scientist

- How to **reduce** the original problem into smaller sub-problems?
- Recursively call the Mirror to solve these sub-problems
- How to **combine** the solutions to the smaller sub-problems into the solution to the original problem?

What are the smaller sub-problems? (★★★★★)

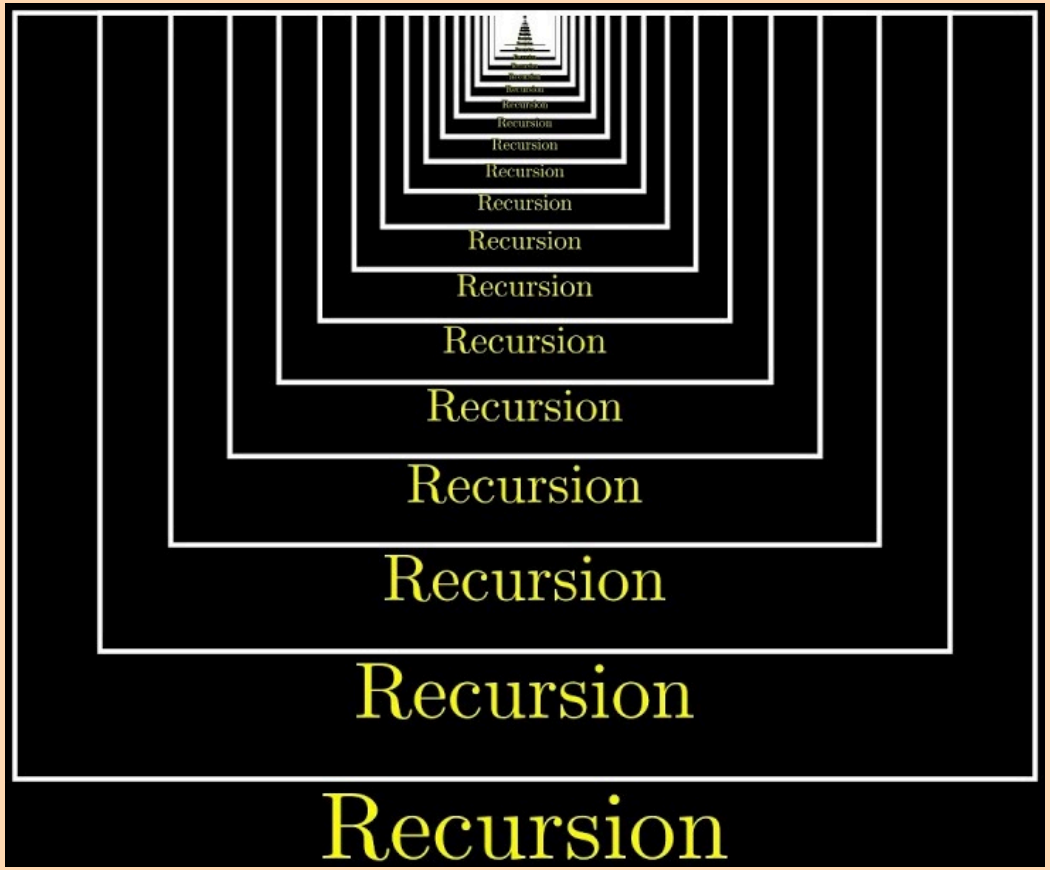


stairs.c

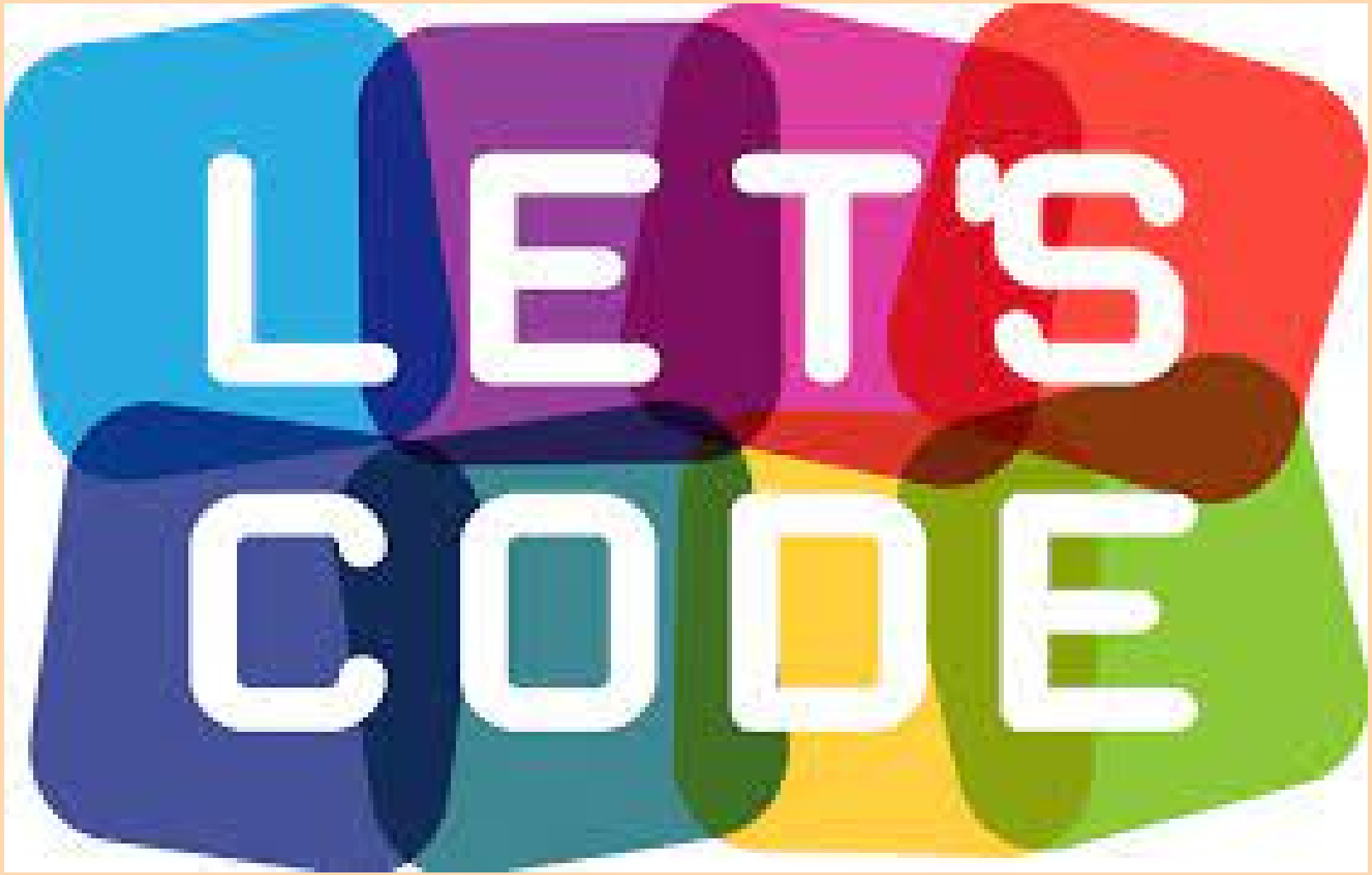
(2) Thinking like a Computer

How does the Mirror work? (stairs.c)

What are the smallest sub-problems?



Solve them without recursion!



min-re.c gcd-re.c bsearch-re.c mergesort.c


THANK YOU