

Tower of Hanoi

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Rules of Tower of Hanoi :

1. Only one disk can be moved at a time
2. Disk can be moved only if it is the uppermost disk on the stack
3. No disk may be replaced on top of the smaller disk.

$\text{hanoi}(n, \text{start}, \text{end}) \Rightarrow$ Outputs a sequence of steps to move n disks from start to end rod.

Assume:

$1 \leq \text{Start} \leq 3$

$1 \leq \text{End} \leq 3$

$\text{Start} \neq \text{End}$

Possible Moves :

$1 \rightarrow 3$

$1 \rightarrow 2$

$3 \rightarrow 2$

$1 \rightarrow 3$

$2 \rightarrow 1$

$2 \rightarrow 3$

$1 \rightarrow 3$

How recursion works :

1. Show $f(1)$ works
2. Assume $f(n-1)$ works
3. Show $f(n)$ works using $f(n-1)$

