

Reves (n=5, pos=0, left+1) K=3

Reves (n=3, pos=0, right+1) K=1

Reves (n=1, pos=0, left+1)

return (0 → 3)✓

disc 1 A → D

Hanoi (n=2, 0, 2, 1)

disc 2 A → C

disc 3 A → B

disc 2 C → B

Reves (n=1, pos=3, left+2)

Return (3 → 1)

Disc 1 D → B

disc 4 A → ~~C~~

disc 5 A → D

disc 4 C → D

... Hanoi (n=2, 0 2 3)✓

Reves (n=3, pos=~~1~~, right 2) K=1

Reves (n=1, pos=1, left+1)

return (1 → 0)

disc 1 B → A

Hanoi (n=2, 1 2 3)

disc 2 B → C

disc 3 → B → D

disc 2 → C → D

R2 Final D

1  
0 1 2 3

Reves (n=1, pos=0, left+1)

disc 1 A → D

*[Signature]*

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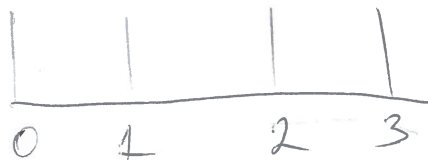
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*[Signature]*

Algo: Right  $\rightarrow$  Left  $\rightarrow$  Right, where

{ Right is R1, R2  
Left is L1, L2

$R1 \rightarrow L1, L2$   
 $R2 \rightarrow L1, L1$   
 $L1 \Rightarrow R1, R2$   
 $L2 \rightarrow R1, R1$



Starting Call: ~~Reves(2, pos=0, Right)~~  
(n, position=0, ~~Right~~ Left)

If  $n=1$ : Reduces to Hanoi

If  $n=2$ :

Reves(2, pos=0, Left)

Reves(1, pos=0, Right 1)  $\rightarrow$  return (0  $\rightarrow$  1)

Hanoi(n=1, 0 2 3)  $\rightarrow$   $\checkmark$

Reves(1, pos=1, Right 2)  $\rightarrow$  return (1  $\rightarrow$  2)  $\checkmark$

~~(n=2, pos=0, Right)~~

~~$\downarrow$  Reves(1, pos=0, Left)  $\rightarrow$  return (0  $\rightarrow$  3)  $\checkmark$~~

~~Hanoi(0 2 1)  $\checkmark$~~

~~Reves(1, pos=3, Left 2)  $\rightarrow$  return (3  $\rightarrow$  1)  $\checkmark$~~

Reves(n=3, pos=0, Left)

K=1

$\rightarrow$  Reves(1, pos=0, Right 1)  $\rightarrow$  returns (0  $\rightarrow$  1)  $\checkmark$

$\rightarrow$  Hanoi(n=2, 0 2 3)  $\checkmark$

$\rightarrow$  Reves(1, pos=1, Right 2)  $\rightarrow$  returns (1  $\rightarrow$  3)  $\checkmark$

Reves(n=4, pos=0, Left) K=2

$\rightarrow$  Reves(2, pos=0, Right 1)

[ Reves(1, pos=0, Left 1) returns (0  $\rightarrow$  3)

Hanoi(0 2 1)  $\checkmark$

Reves(1, pos=3, Left 2) returns (3  $\rightarrow$  1)

$\rightarrow$  Hanoi(n=2, 0 2 3)  $\checkmark$

$\rightarrow$  Reves(2, pos=1, Right 2)  $\checkmark$

[ Reves(1, pos=1, Left 1)  
returns (1  $\rightarrow$  0)

Hanoi(1 2 3)  $\checkmark$

Reves(1, pos=0, Left 1)  
returns (0  $\rightarrow$  3)  $\checkmark$