

Diagram illustrating a tree structure of 19 nodes, representing different states of a 5-disk Tower of Hanoi problem. The nodes are labeled with their state vectors and the moves between them are indicated by blue numbers.

Root Node: ROOT -4 -3 -1 -6 2 5

Level 1 Nodes:

- 4 -3 -2 6 1 5
- 4 -3 6 1 2 5
- 2 6 1 3 5

Level 2 Nodes:

- 4 -3 -2 -1 -6 5
- 1 -6 2 3 4 5
- 9DUP -4 -3 -2 -1 -6 5
- 2 -1 -6 3 4 5
- 16DUP -2 -1 -6 3 4 5
- 19DUP -1 -6 2 3 4 5

Level 3 Nodes:

- 3DRAW 6DRAW 5 -4 -3 -2 6
- 5DRAW 57DRAW 5 -1 -6 -5 10DRAW 2 6 1
- 5DRAW 56DRAW 5 -4 -3 -2 3
- 5DRAW 54DRAW 5 -2 -1 -6 7
- 3DRAW 38DRAW 5 -2 -1 -6 9
- 5DRAW 31DRAW 5 -1 -6 -5 -4 -3 -2

The moves between nodes are indicated by blue numbers on the edges:

- From ROOT to -4 -3 -2 6 1 5: 2, -3
- From ROOT to -4 -3 6 1 2 5: 2, -1
- From ROOT to -2 6 1 3 5: 5, -4
- From -4 -3 -2 6 1 5 to -4 -3 -2 -1 -6 5: 1, -2
- From -4 -3 -2 6 1 5 to -1 -6 2 3 4 5: 5, -4
- From -4 -3 6 1 2 5 to 9DUP -4 -3 -2 -1 -6 5: 2, -3
- From -4 -3 6 1 2 5 to -2 -1 -6 3 4 5: 5, -4
- From -2 6 1 3 5 to 16DUP -2 -1 -6 3 4 5: 1, -2
- From -2 6 1 3 5 to 19DUP -1 -6 2 3 4 5: 3, -2
- From -4 -3 -2 -1 -6 5 to 3DRAW 6DRAW 5 -4 -3 -2 6: 5, -4
- From -4 -3 -2 -1 -6 5 to 5DRAW 57DRAW 5 -1 -6 -5 10DRAW 2 6 1: 5, -6
- From -1 -6 2 3 4 5 to 5DRAW 56DRAW 5 -4 -3 -2 3: 2, -1
- From -1 -6 2 3 4 5 to 5DRAW 54DRAW 5 -2 -1 -6 7: 5, -6
- From 9DUP -4 -3 -2 -1 -6 5 to 3DRAW 38DRAW 5 -2 -1 -6 9: 5, -4
- From 9DUP -4 -3 -2 -1 -6 5 to 5DRAW 31DRAW 5 -1 -6 -5 -4 -3 -2: 5, -6
- From -2 -1 -6 3 4 5 to 3DRAW 38DRAW 5 -2 -1 -6 9: 3, -2
- From -2 -1 -6 3 4 5 to 5DRAW 31DRAW 5 -1 -6 -5 -4 -3 -2: 5, -6
- From 16DUP -2 -1 -6 3 4 5 to 3DRAW 38DRAW 5 -2 -1 -6 9: 3, -2
- From 16DUP -2 -1 -6 3 4 5 to 5DRAW 31DRAW 5 -1 -6 -5 -4 -3 -2: 5, -6
- From 19DUP -1 -6 2 3 4 5 to 5DRAW 31DRAW 5 -1 -6 -5 -4 -3 -2: 2, -1
- From 19DUP -1 -6 2 3 4 5 to 5DRAW 31DRAW 5 -1 -6 -5 -4 -3 -2: 5, -6