

Diagram illustrating the construction of a 6-ary tree structure, showing the root node and its descendants, with labels indicating the sequence of nodes and the corresponding 6-ary tree structure.

The root node is labeled **ROOT-1 6 5 -4 3 2**. The tree structure is defined by the sequence of nodes and their corresponding 6-ary tree structure:

- Level 1:**
 - Node 1: **1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 2: **2 6 -5 -4 -3 2** (6-ary tree structure: 5, 4)
 - Node 3: **3 4 -5 -6 1 2 6 5 -4 -3 -2** (6-ary tree structure: 2, 1, 2, 3)
- Level 2:**
 - Node 4: **4 1 6 -5 -4 3 2** (6-ary tree structure: 6, 5)
 - Node 5: **5 3 -4 -5 -6 1 2** (6-ary tree structure: 3, 4)
 - Node 6: **6 2 1** (6-ary tree structure: 2, 1)
 - Node 7: **7 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 8: **8 4 -5 -6 1 2** (6-ary tree structure: 4, 5)
 - Node 9: **9 2 -3** (6-ary tree structure: 2, 3)
 - Node 10: **10 2 1** (6-ary tree structure: 2, 1)
 - Node 11: **11 2 3** (6-ary tree structure: 2, 3)
 - Node 12: **12 5 -6** (6-ary tree structure: 5, 6)
 - Node 13: **13 6 -5** (6-ary tree structure: 6, 5)
 - Node 14: **14 5 -6** (6-ary tree structure: 5, 6)
 - Node 15: **15 6 -5** (6-ary tree structure: 6, 5)
- Level 3:**
 - Node 16: **16 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 17: **17 2 1** (6-ary tree structure: 2, 1)
 - Node 18: **18 6 5** (6-ary tree structure: 6, 5)
 - Node 19: **19 2 1** (6-ary tree structure: 2, 1)
 - Node 20: **20 2 3** (6-ary tree structure: 2, 3)
 - Node 21: **21 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 22: **22 5 -6** (6-ary tree structure: 5, 6)
 - Node 23: **23 2 -3** (6-ary tree structure: 2, 3)
 - Node 24: **24 4 -5** (6-ary tree structure: 4, 5)
 - Node 25: **25 4 3** (6-ary tree structure: 4, 3)
 - Node 26: **26 5 -6** (6-ary tree structure: 5, 6)
 - Node 27: **27 2 -3** (6-ary tree structure: 2, 3)
 - Node 28: **28 5 -4** (6-ary tree structure: 5, 4)
- Level 4:**
 - Node 29: **29 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 30: **30 2 1** (6-ary tree structure: 2, 1)
 - Node 31: **31 6 5** (6-ary tree structure: 6, 5)
 - Node 32: **32 2 1** (6-ary tree structure: 2, 1)
 - Node 33: **33 2 3** (6-ary tree structure: 2, 3)
 - Node 34: **34 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 35: **35 5 -6** (6-ary tree structure: 5, 6)
 - Node 36: **36 2 -3** (6-ary tree structure: 2, 3)
 - Node 37: **37 4 -5** (6-ary tree structure: 4, 5)
 - Node 38: **38 4 3** (6-ary tree structure: 4, 3)
 - Node 39: **39 5 -6** (6-ary tree structure: 5, 6)
 - Node 40: **40 2 -3** (6-ary tree structure: 2, 3)
 - Node 41: **41 5 -4** (6-ary tree structure: 5, 4)
- Level 5:**
 - Node 42: **42 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 43: **43 2 1** (6-ary tree structure: 2, 1)
 - Node 44: **44 6 5** (6-ary tree structure: 6, 5)
 - Node 45: **45 2 1** (6-ary tree structure: 2, 1)
 - Node 46: **46 2 3** (6-ary tree structure: 2, 3)
 - Node 47: **47 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 48: **48 5 -6** (6-ary tree structure: 5, 6)
 - Node 49: **49 2 -3** (6-ary tree structure: 2, 3)
 - Node 50: **50 4 -5** (6-ary tree structure: 4, 5)
 - Node 51: **51 4 3** (6-ary tree structure: 4, 3)
 - Node 52: **52 5 -6** (6-ary tree structure: 5, 6)
 - Node 53: **53 2 -3** (6-ary tree structure: 2, 3)
 - Node 54: **54 5 -4** (6-ary tree structure: 5, 4)
- Level 6:**
 - Node 55: **55 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 56: **56 2 1** (6-ary tree structure: 2, 1)
 - Node 57: **57 6 5** (6-ary tree structure: 6, 5)
 - Node 58: **58 2 1** (6-ary tree structure: 2, 1)
 - Node 59: **59 2 3** (6-ary tree structure: 2, 3)
 - Node 60: **60 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 61: **61 5 -6** (6-ary tree structure: 5, 6)
 - Node 62: **62 2 -3** (6-ary tree structure: 2, 3)
 - Node 63: **63 4 -5** (6-ary tree structure: 4, 5)
 - Node 64: **64 4 3** (6-ary tree structure: 4, 3)
 - Node 65: **65 5 -6** (6-ary tree structure: 5, 6)
 - Node 66: **66 2 -3** (6-ary tree structure: 2, 3)
 - Node 67: **67 5 -4** (6-ary tree structure: 5, 4)
- Level 7:**
 - Node 68: **68 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 69: **69 2 1** (6-ary tree structure: 2, 1)
 - Node 70: **70 6 5** (6-ary tree structure: 6, 5)
 - Node 71: **71 2 1** (6-ary tree structure: 2, 1)
 - Node 72: **72 2 3** (6-ary tree structure: 2, 3)
 - Node 73: **73 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 74: **74 5 -6** (6-ary tree structure: 5, 6)
 - Node 75: **75 2 -3** (6-ary tree structure: 2, 3)
 - Node 76: **76 4 -5** (6-ary tree structure: 4, 5)
 - Node 77: **77 4 3** (6-ary tree structure: 4, 3)
 - Node 78: **78 5 -6** (6-ary tree structure: 5, 6)
 - Node 79: **79 2 -3** (6-ary tree structure: 2, 3)
 - Node 80: **80 5 -4** (6-ary tree structure: 5, 4)
- Level 8:**
 - Node 81: **81 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 82: **82 2 1** (6-ary tree structure: 2, 1)
 - Node 83: **83 6 5** (6-ary tree structure: 6, 5)
 - Node 84: **84 2 1** (6-ary tree structure: 2, 1)
 - Node 85: **85 2 3** (6-ary tree structure: 2, 3)
 - Node 86: **86 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 87: **87 5 -6** (6-ary tree structure: 5, 6)
 - Node 88: **88 2 -3** (6-ary tree structure: 2, 3)
 - Node 89: **89 4 -5** (6-ary tree structure: 4, 5)
 - Node 90: **90 4 3** (6-ary tree structure: 4, 3)
 - Node 91: **91 5 -6** (6-ary tree structure: 5, 6)
 - Node 92: **92 2 -3** (6-ary tree structure: 2, 3)
 - Node 93: **93 5 -4** (6-ary tree structure: 5, 4)
- Level 9:**
 - Node 94: **94 1 6 -5 -4 3 2** (6-ary tree structure: 3, 4)
 - Node 95: **95 2 1** (6-ary tree structure: 2, 1)
 - Node 96: **96 6 5** (6-ary tree structure: 6, 5)
 - Node 97: **97 2 1** (6-ary tree structure: 2, 1)
 - Node 98: **98 2 3** (6-ary tree structure: 2, 3)
 - Node 99: **99 3 4 -5 -6 1 2** (6-ary tree structure: 4, 3)
 - Node 100: **100 5 -6** (6-ary tree structure: 5, 6)
 - Node 101: **101 2 -3** (6-ary tree structure: 2, 3)
 - Node 102: **102 4 -5** (6-ary tree structure: 4, 5)
 - Node 103: **103 4 3** (6-ary tree structure: 4, 3)
 - Node 104: **104 5 -6** (6-ary tree structure: 5, 6)
 - Node