

BB

1)

a) gap is 5

[5 3 6 9 2 4 1] → [4 3 6 9 2 5 1] → [4 1 6 9 2 5 3] →

gap set to 3

[4 1 6 9 2 5 3] → [4 1 6 9 2 5 3] → [4 1 5 9 2 6 3] →

gap set to 1

[4 1 5 9 2 6 3] → [1 4 5 9 2 6 3] → [1 4 3 5 2 6 9] →
[1 4 3 5 2 6 9] → [1 3 4 2 5 6 9] → [1 3 2 4 5 6 9] → [1 2 3 4 5 6 9]

b) Piv [5, 3, 6, 9, 2, 4, 1] → [3, 5, 6, 9, 1, 2, 4] → [1, 2, 3, 4, 5, 6, 9]

c)

[5 3 6 9 2 4 1] → Build Max Heap [9 6 3 5 ...] → [9 6 3 5 2 ...] → [9 6 4 5 2 3 ...]

[9 6 4 5 2 3 1] → swap and exclude [1 6 4 5 2 3 | 9] → Build Min [6 5 4 1 2 3 | 9] → [3 5 4 1 2 | 6 9]

→ [5 3 4 1 2 | 6 9] → [2 3 4 1 | 5 6 9] → [4 3 2 1 | 5 6 9] → [3 2 1 | 4 5 6 9]

→ [2 1 | 3 4 5 6 9] → [1 | 2 3 4 5 6 9] → [1 2 3 4 5 6 9]