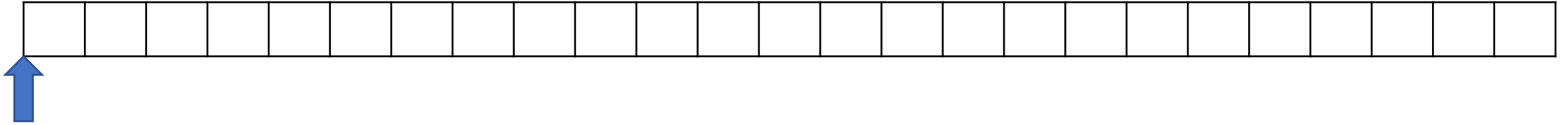
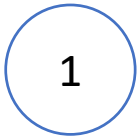
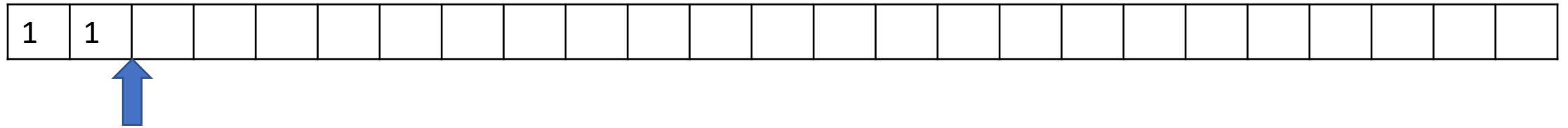


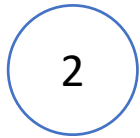
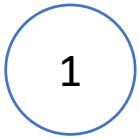
# Heap



# Heap

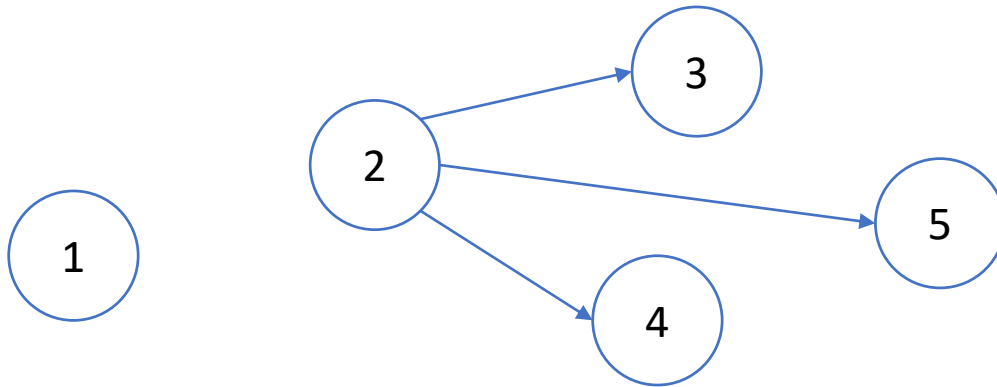


# Heap



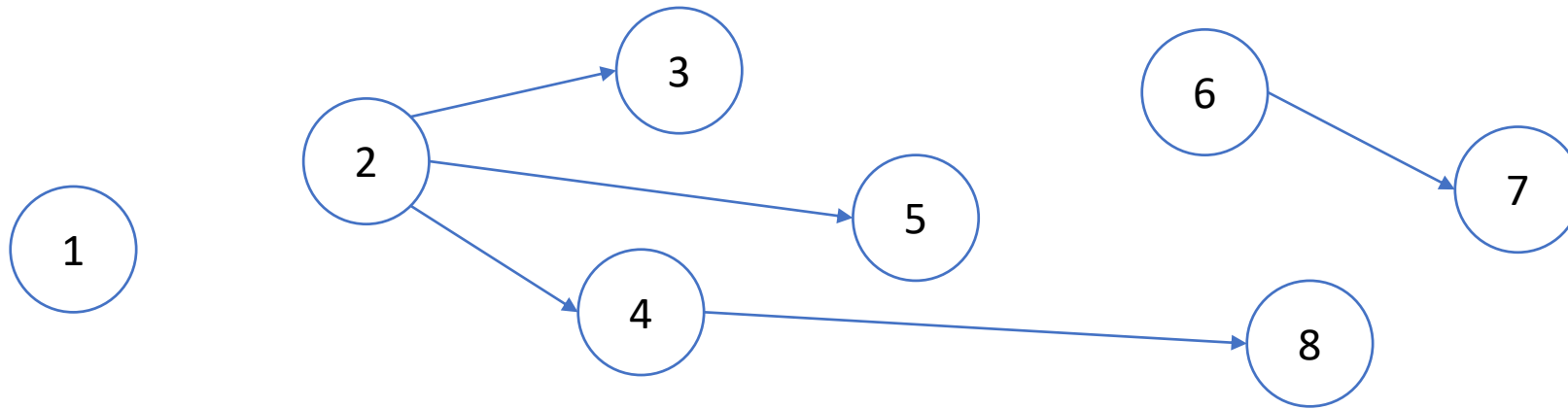
# Heap

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



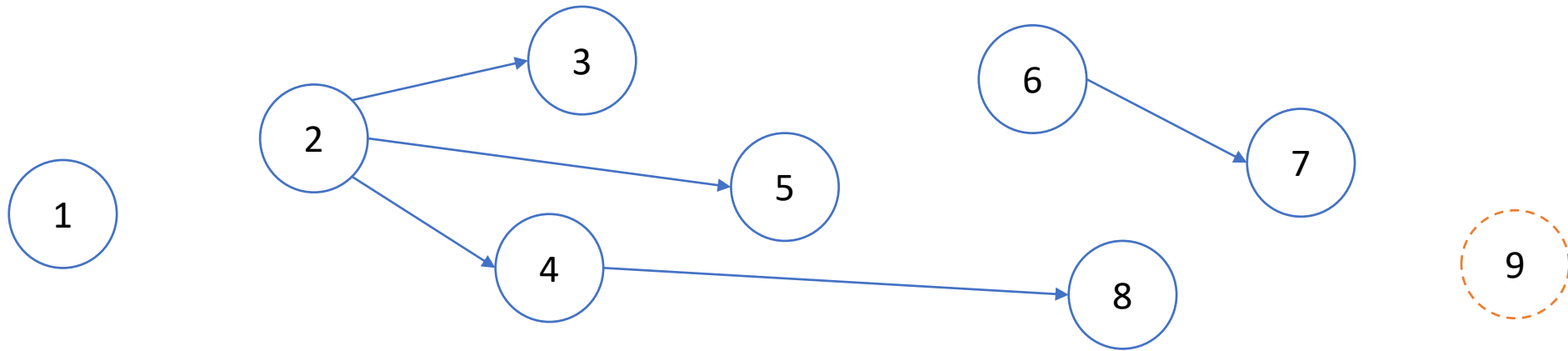
# Heap

1	1	2	2	3	3	3	4	4	4	4	5	5	5	5	5	5	6	6	7	8	8	8	8	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--



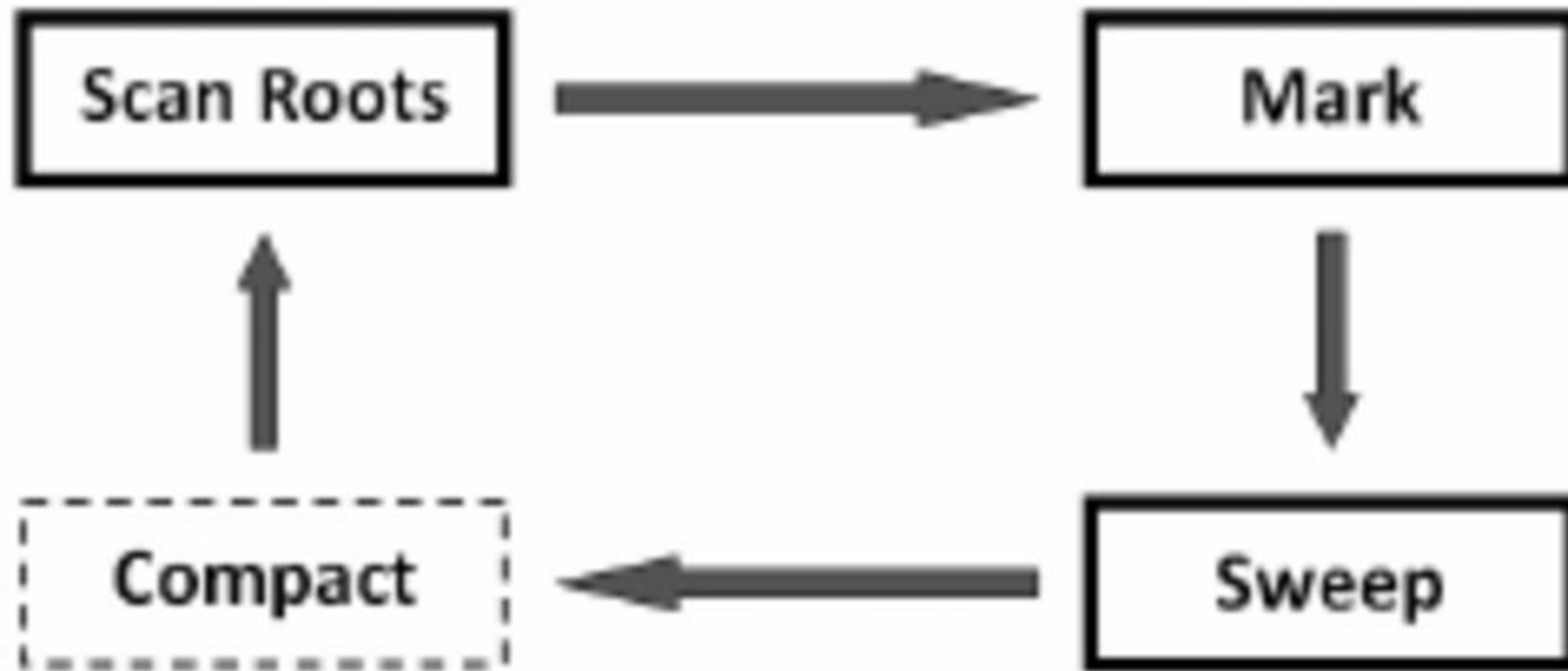
# Heap

1	1	2	2	3	3	3	4	4	4	4	5	5	5	5	5	5	6	6	7	8	8	8	8	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--



System.OutOfMemoryException

# Garbage Collection Cycle



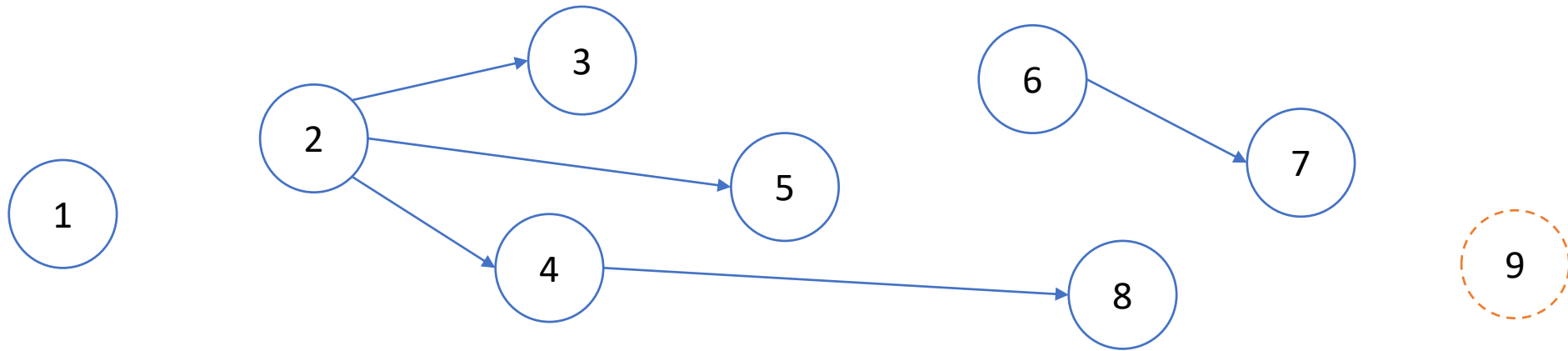


# Roots

- Local variable in a method that is currently running
- Static variables

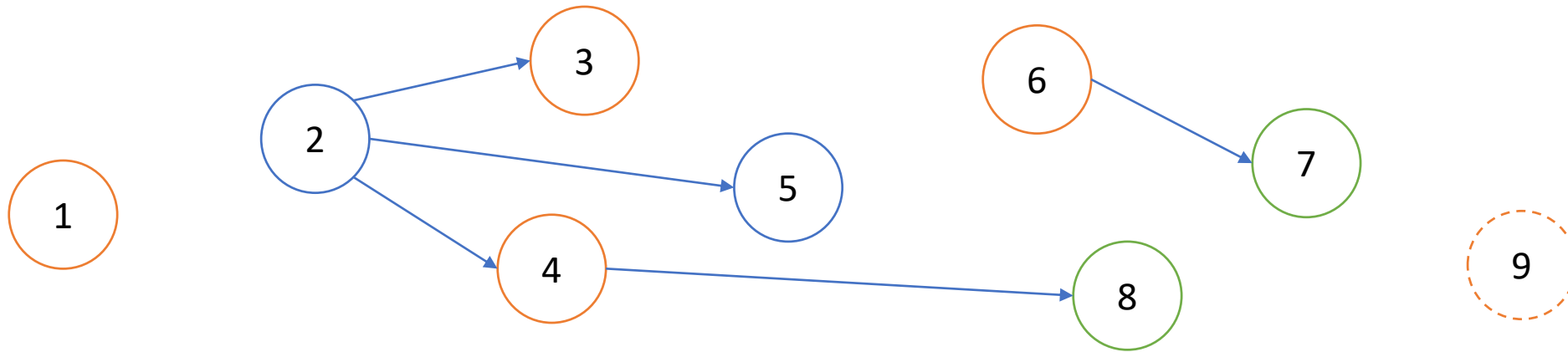
# Garbage Collection – Scan Roots and Mark

1	1	2	2	3	3	3	4	4	4	4	5	5	5	5	5	5	6	6	7	8	8	8	8	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--

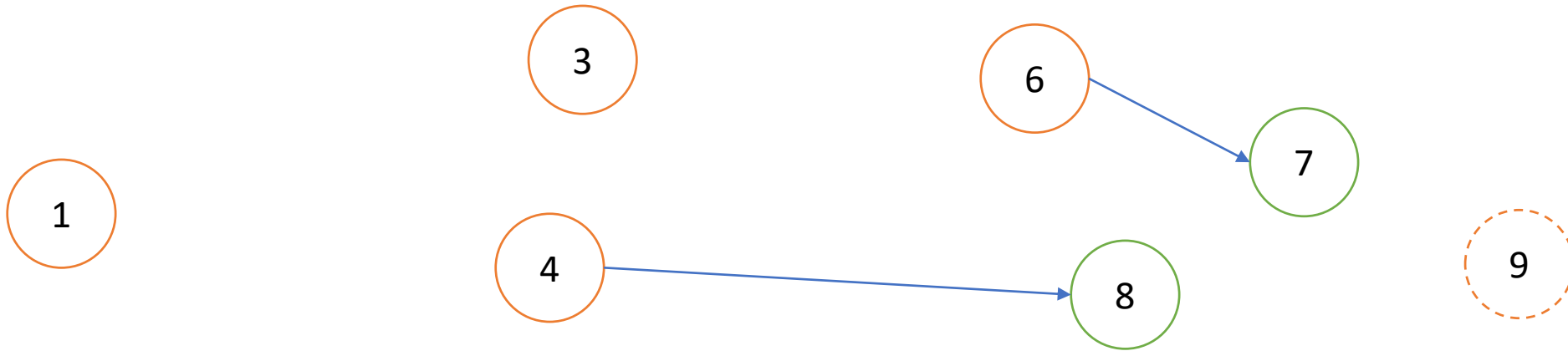
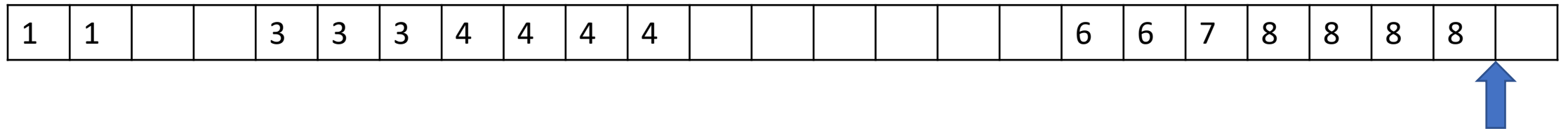


# Garbage Collection – Scan Roots and Mark

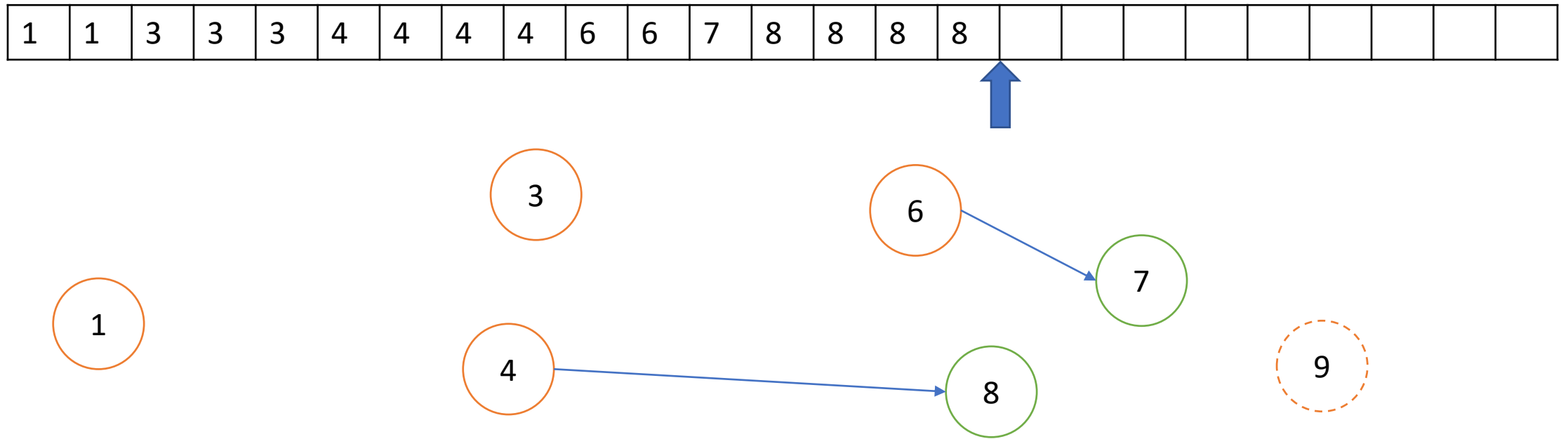
1	1	2	2	3	3	3	4	4	4	4	5	5	5	5	5	5	6	6	7	8	8	8	8	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--



# Garbage Collection – Sweep

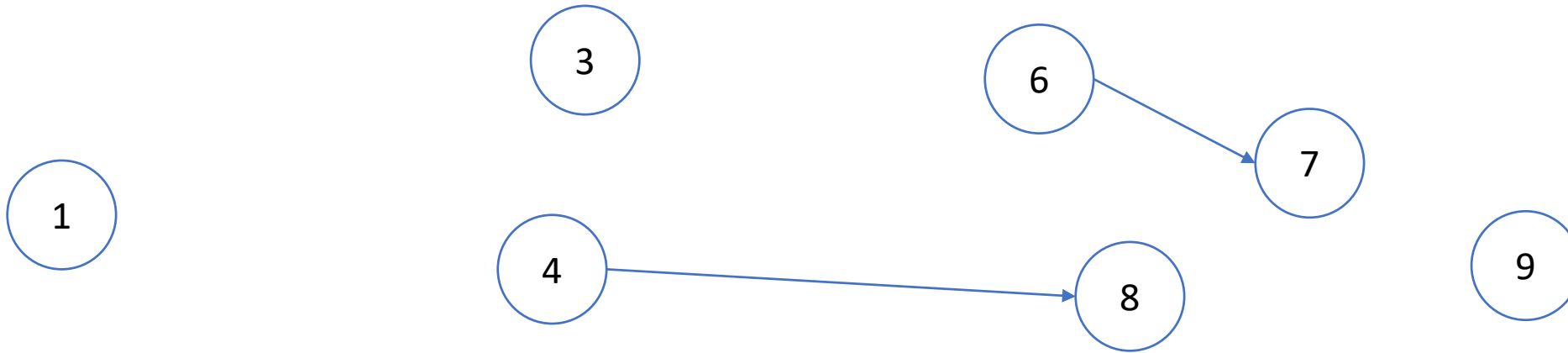


# Garbage Collection – Compact



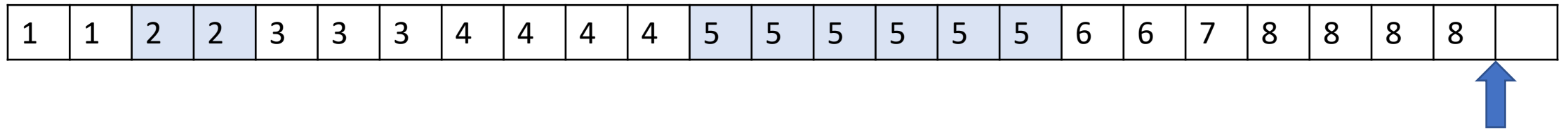
# Continue

1	1	3	3	3	4	4	4	4	6	6	7	8	8	8	8	9	9	9						
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--



# GC Optimization - Generations

# No generations






# No generations

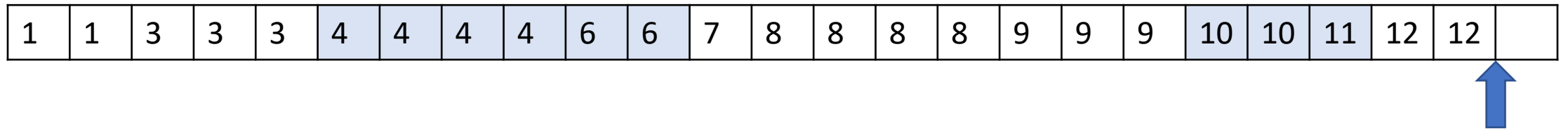
[illegible]

# No generations

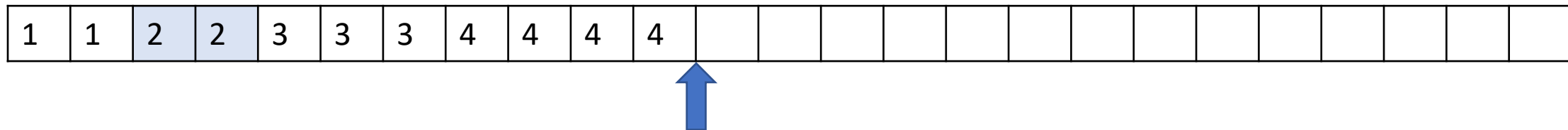
1	1	3	3	3	4	4	4	4	6	6	7	8	8	8	8	9	9	9	10	10	11	12	12	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	--



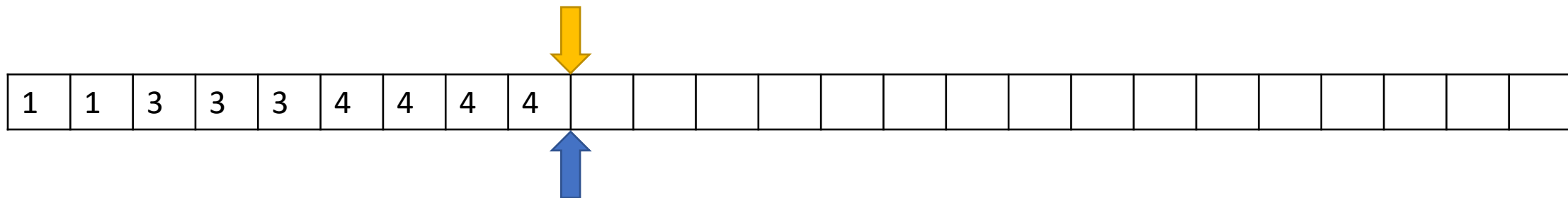
# No generations



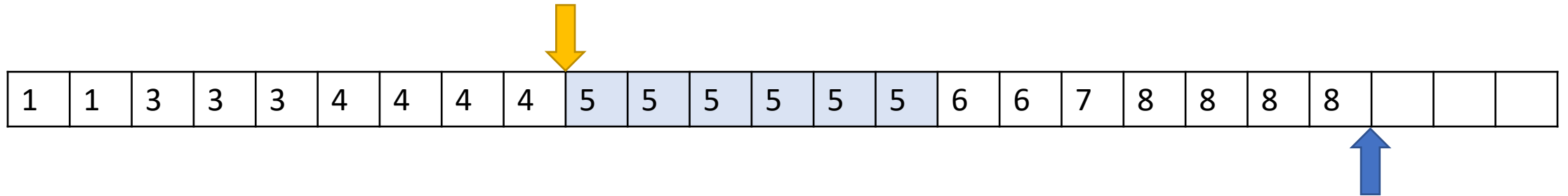
# 3 generations



# 3 generations

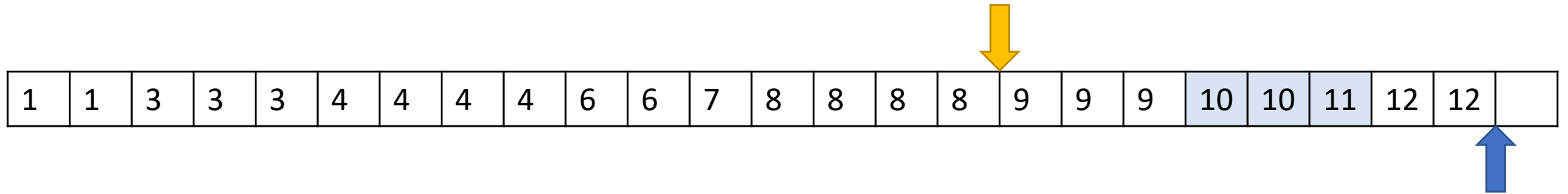


# 3 generations



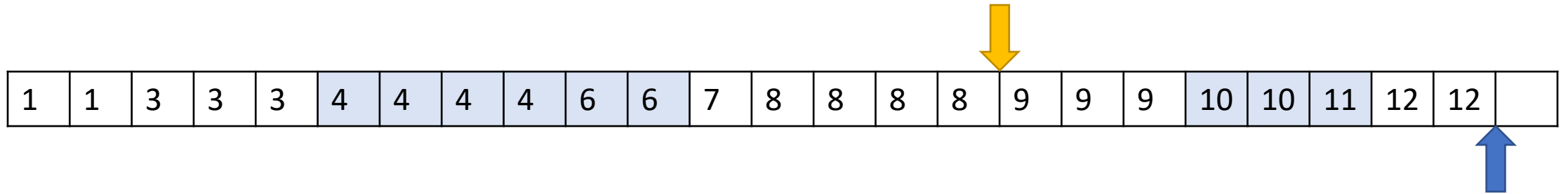


# 3 generations

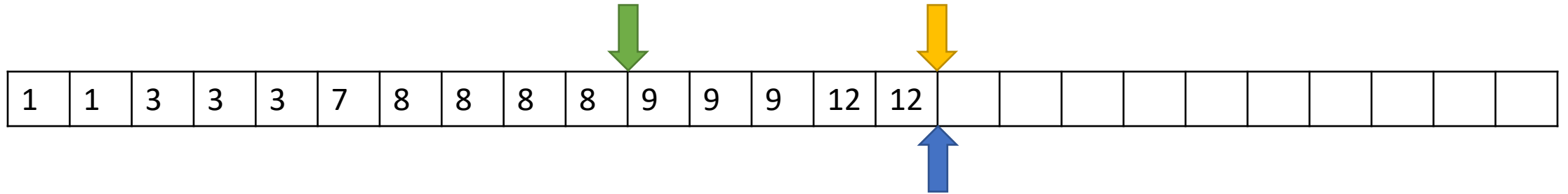




# 3 generations



# 3 generations



# 3 generations

