http://algs4.cs.princeton.edu

1.5 PATH COMPRESSION DEMO

click to begin demo

Weighted quick-union with path compression demo

	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	3	4	5	6	7	8	9

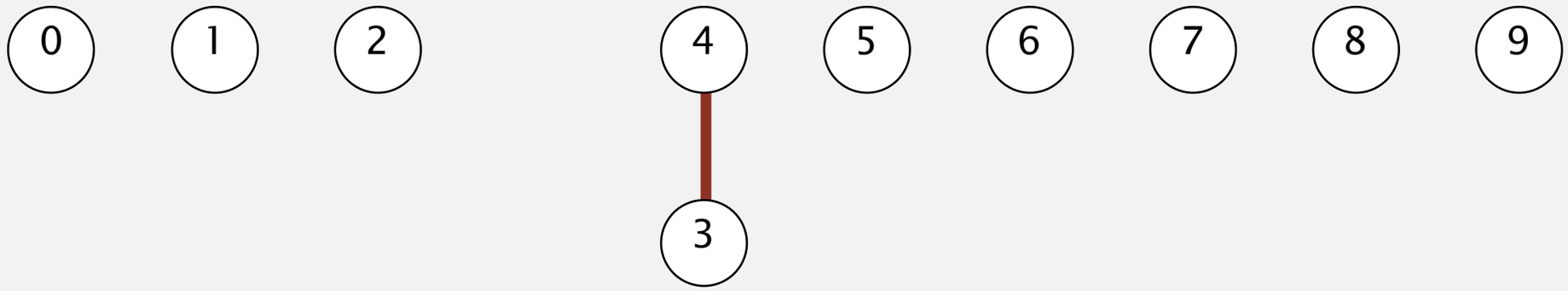
Weighted quick-union with path compression demo

union(4, 3)

	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	3	4	5	6	7	8	9

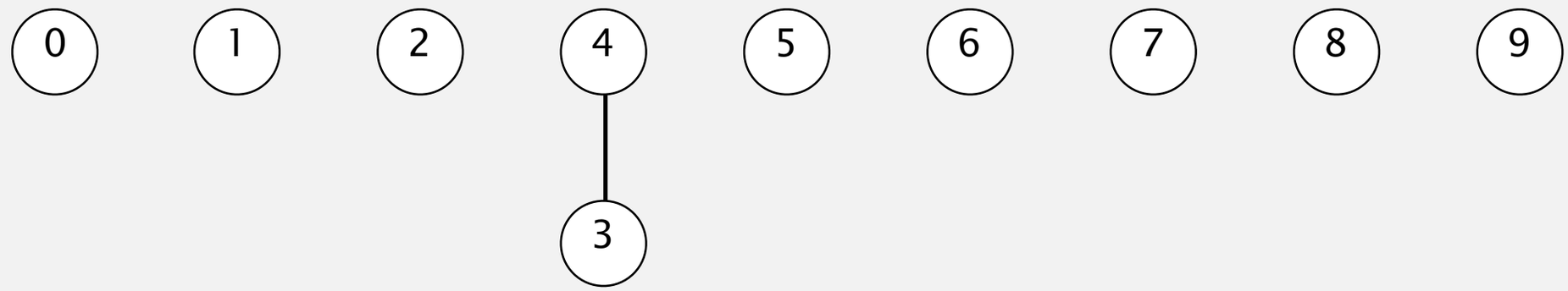
Weighted quick-union with path compression demo

union(4, 3)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	5	6	7	8	9

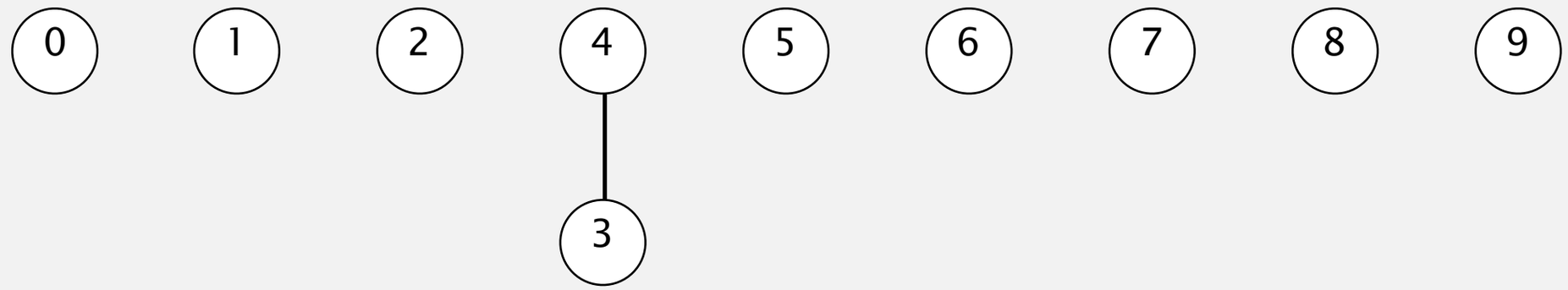
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	5	6	7	8	9

Weighted quick-union with path compression demo

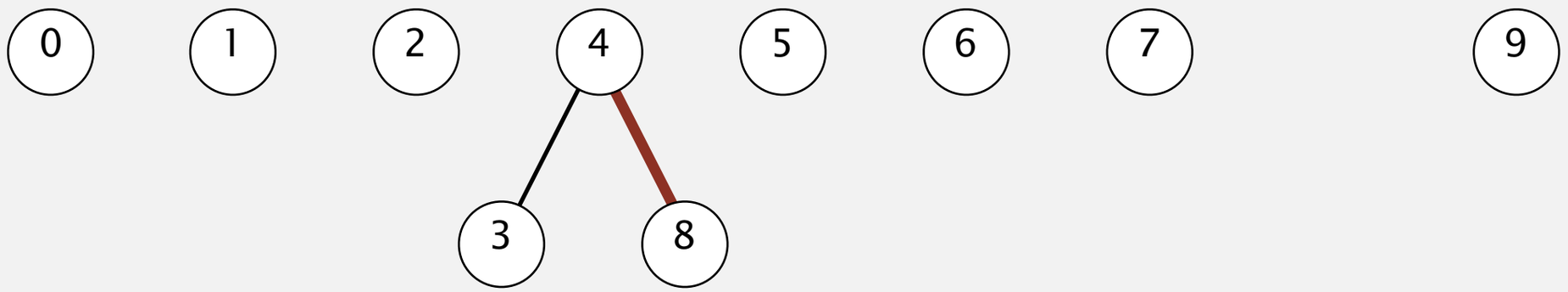
union(3, 8)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	5	6	7	8	9

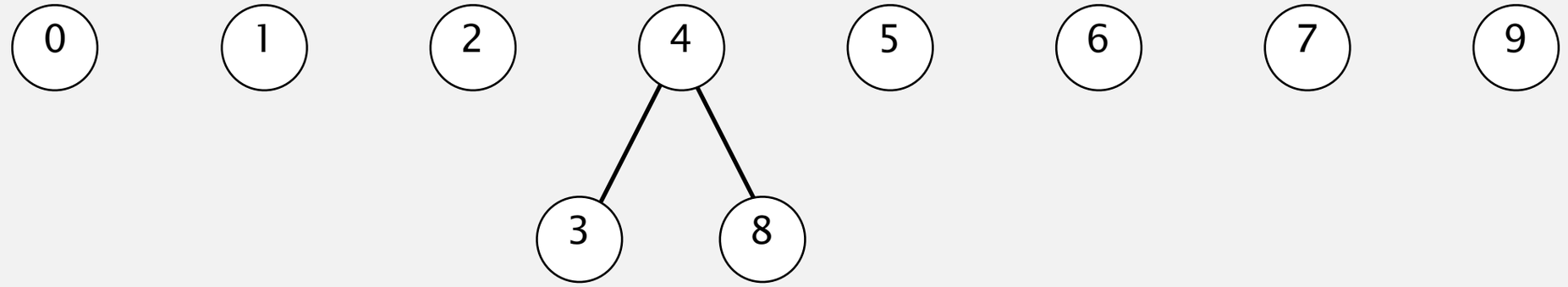
Weighted quick-union with path compression demo

union(3, 8)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	5	6	7	4	9

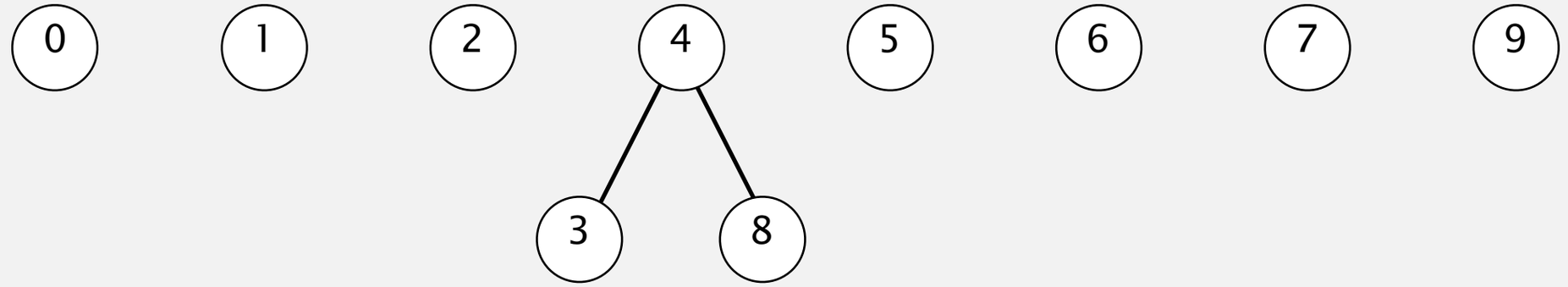
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	5	6	7	4	9

Weighted quick-union with path compression demo

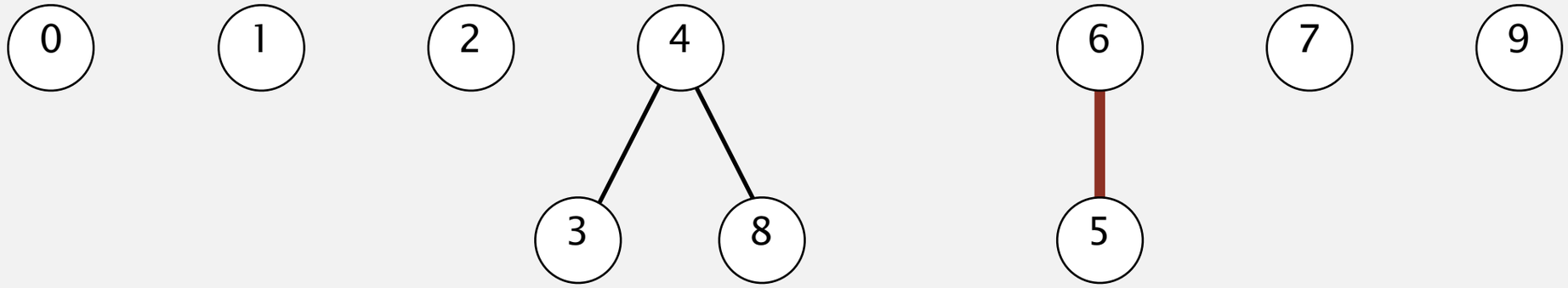
union(6, 5)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	5	6	7	4	9

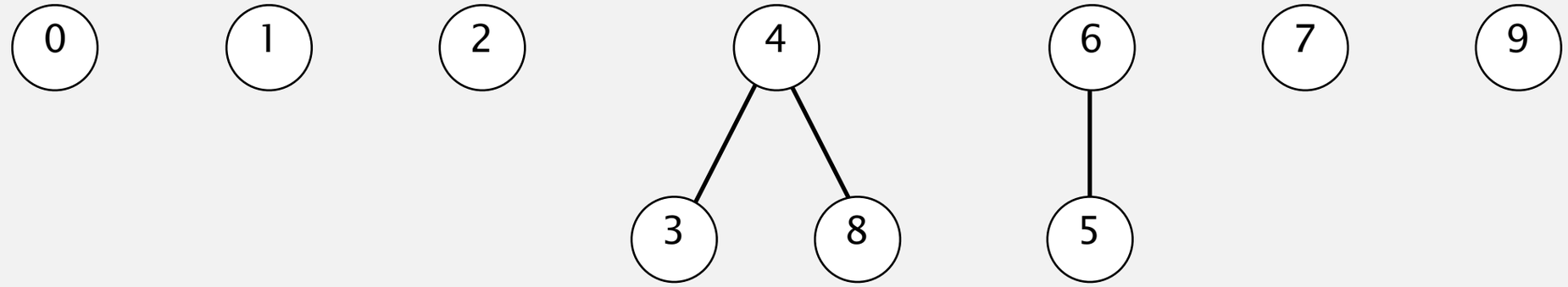
Weighted quick-union with path compression demo

union(6, 5)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	6	6	7	4	9

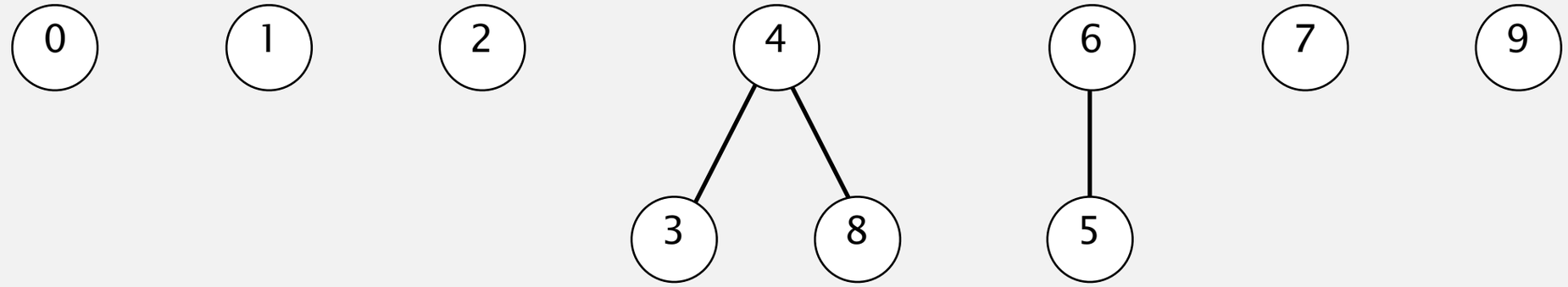
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	6	6	7	4	9

Weighted quick-union with path compression demo

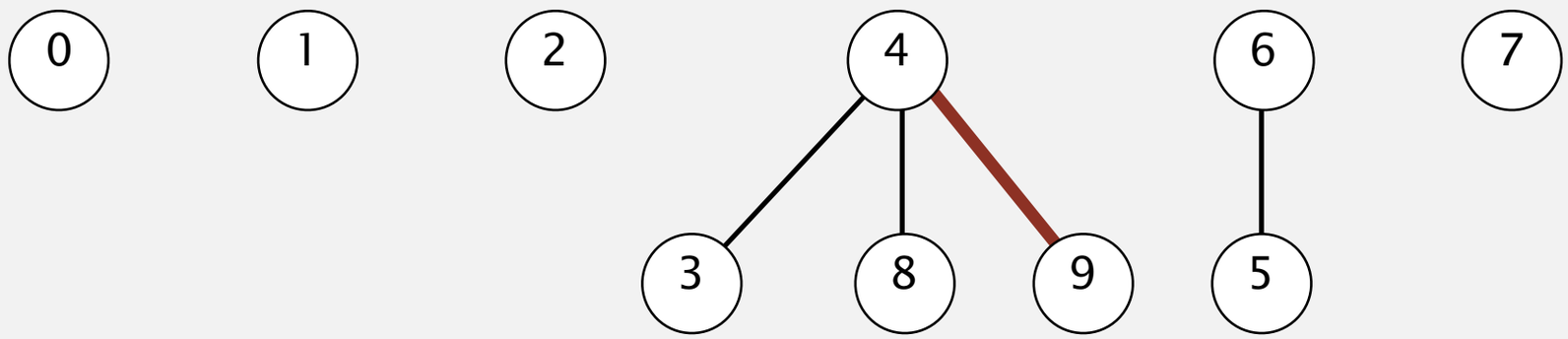
union(9, 4)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	6	6	7	4	9

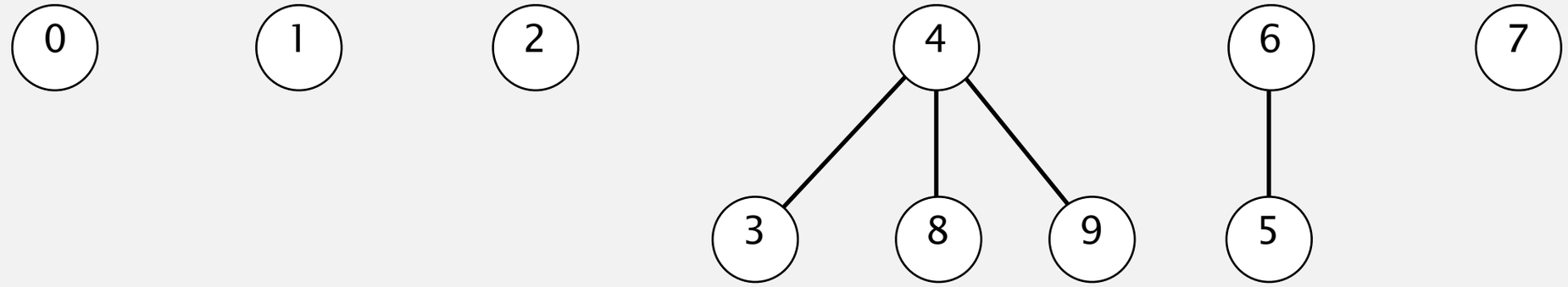
Weighted quick-union with path compression demo

union(9, 4)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	6	6	7	4	4

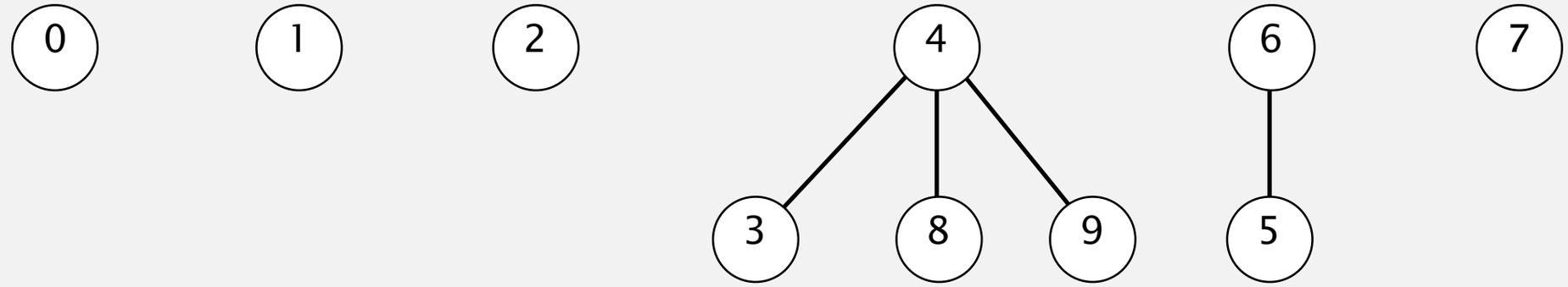
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	6	6	7	4	4

Weighted quick-union with path compression demo

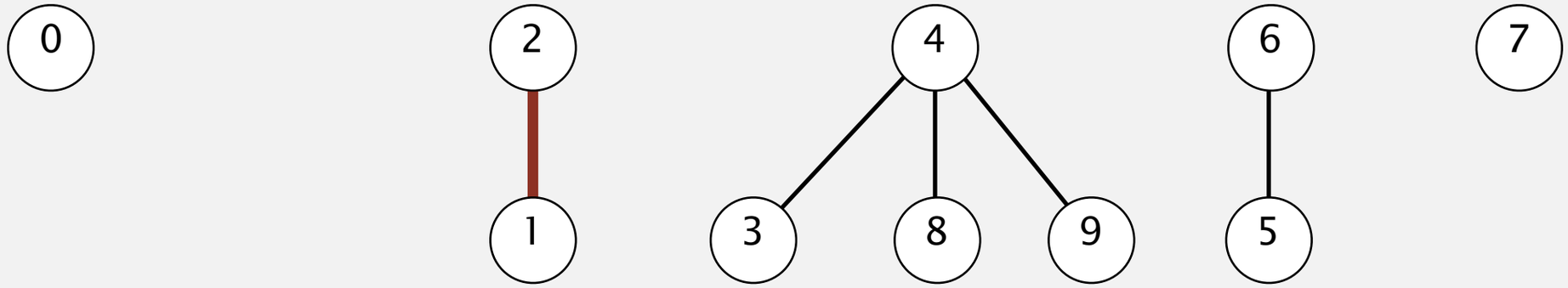
union(2, 1)



	0	1	2	3	4	5	6	7	8	9
id[]	0	1	2	4	4	6	6	7	4	4

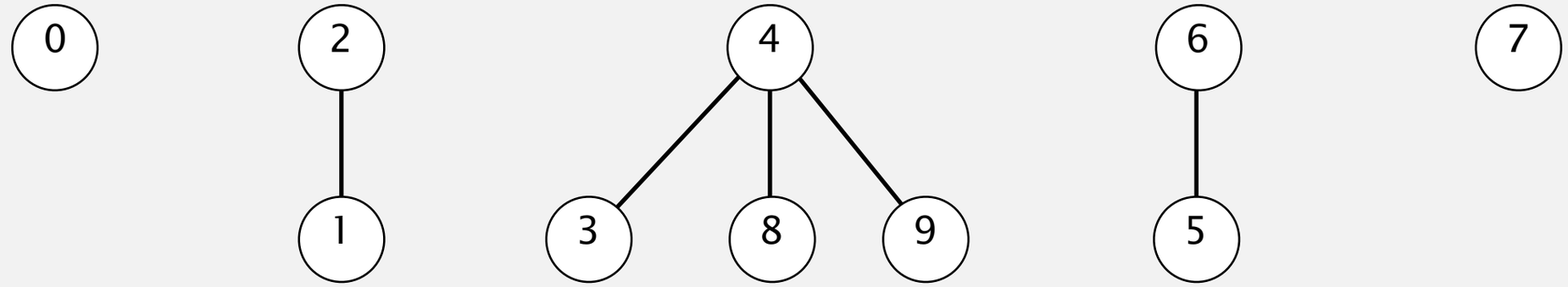
Weighted quick-union with path compression demo

union(2, 1)



	0	1	2	3	4	5	6	7	8	9
id[]	0	2	2	4	4	6	6	7	4	4

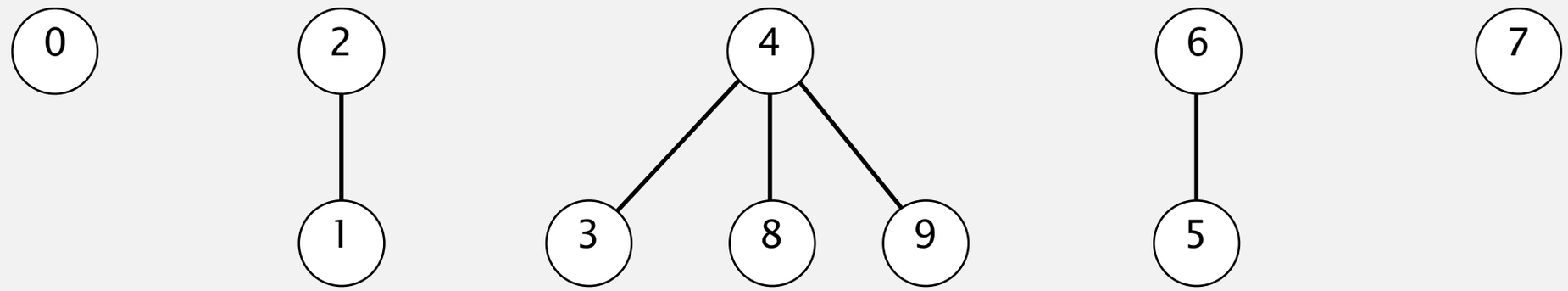
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	0	2	2	4	4	6	6	7	4	4

Weighted quick-union with path compression demo

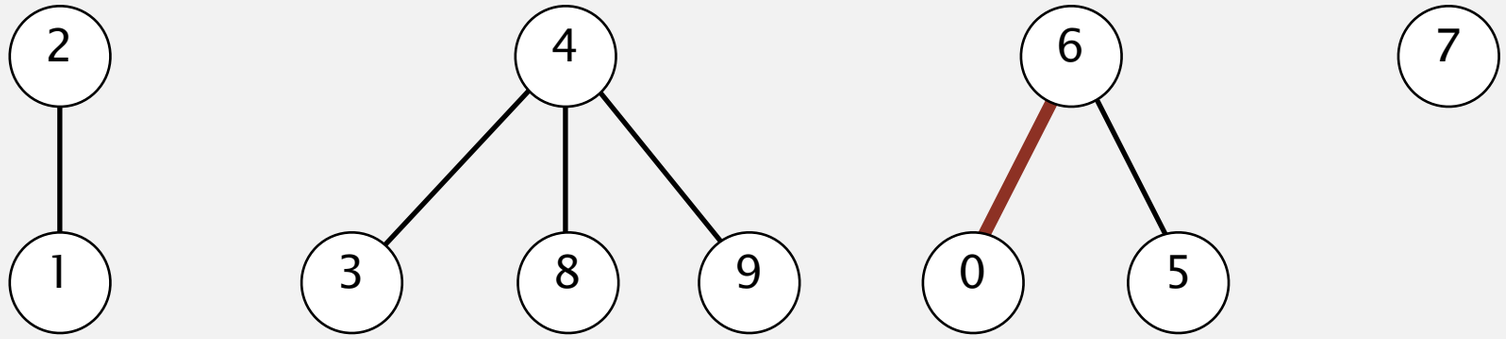
union(5, 0)



	0	1	2	3	4	5	6	7	8	9
id[]	0	2	2	4	4	6	6	7	4	4

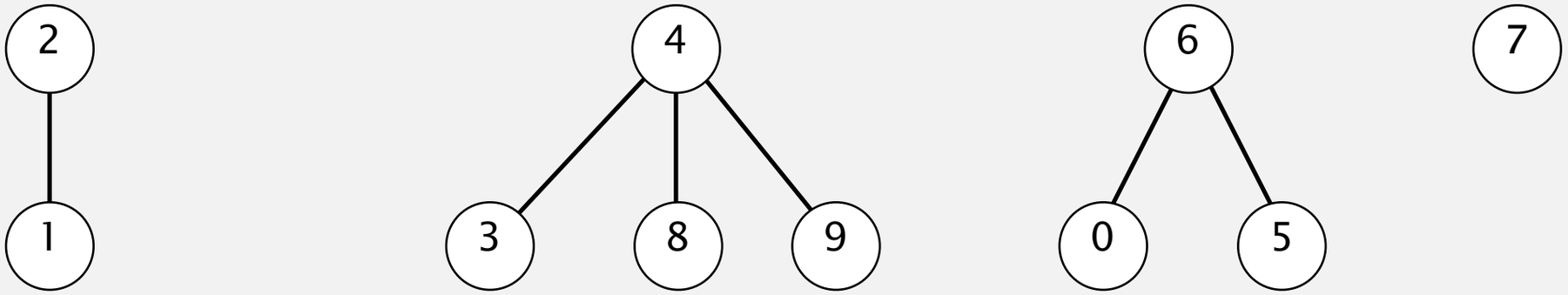
Weighted quick-union with path compression demo

union(5, 0)



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	2	4	4	6	6	7	4	4

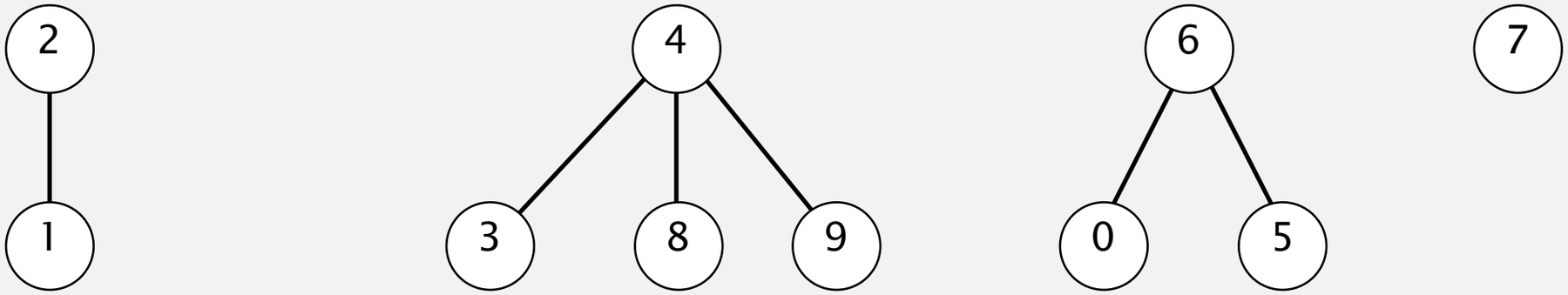
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	2	4	4	6	6	7	4	4

Weighted quick-union with path compression demo

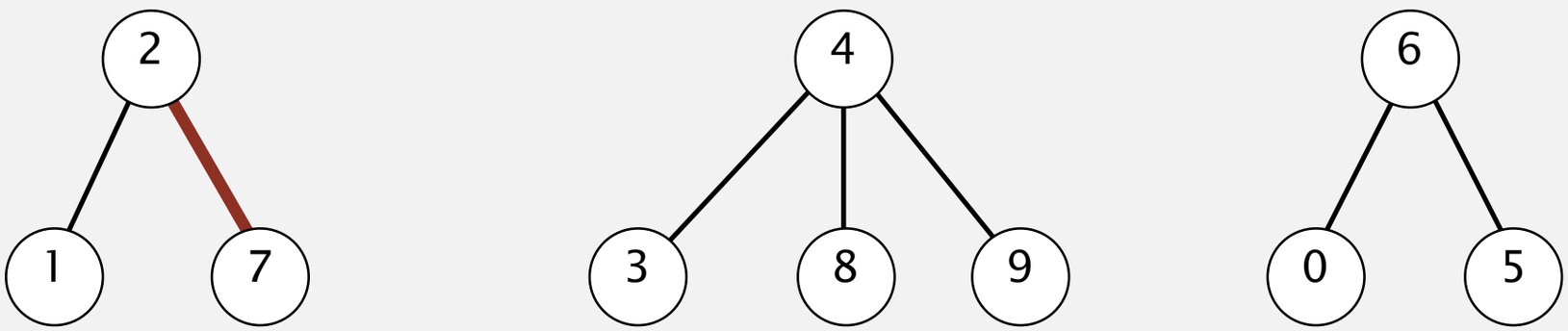
union(7, 2)



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	2	4	4	6	6	7	4	4

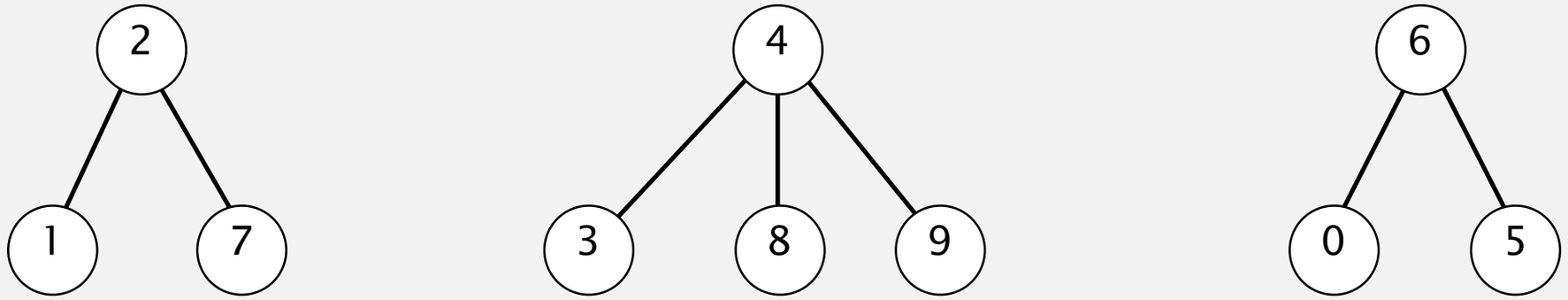
Weighted quick-union with path compression demo

union(7, 2)



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	2	4	4	6	6	2	4	4

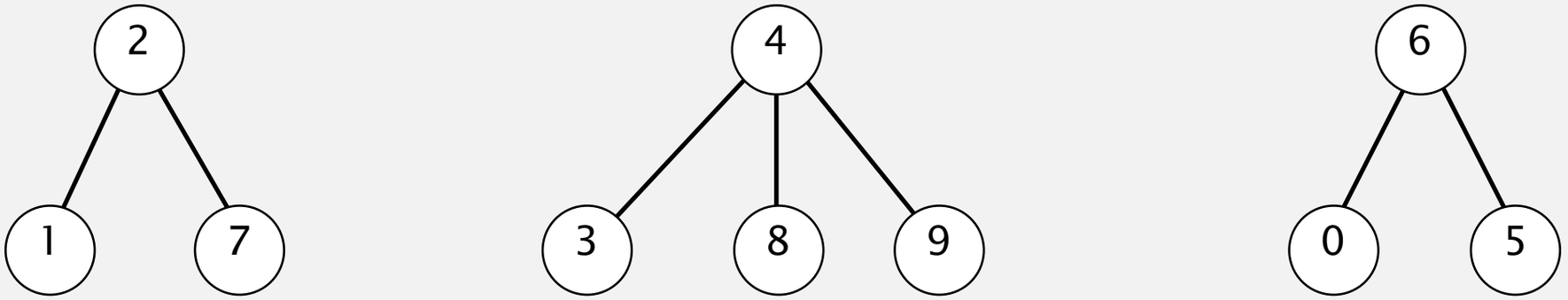
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	2	4	4	6	6	2	4	4

Weighted quick-union with path compression demo

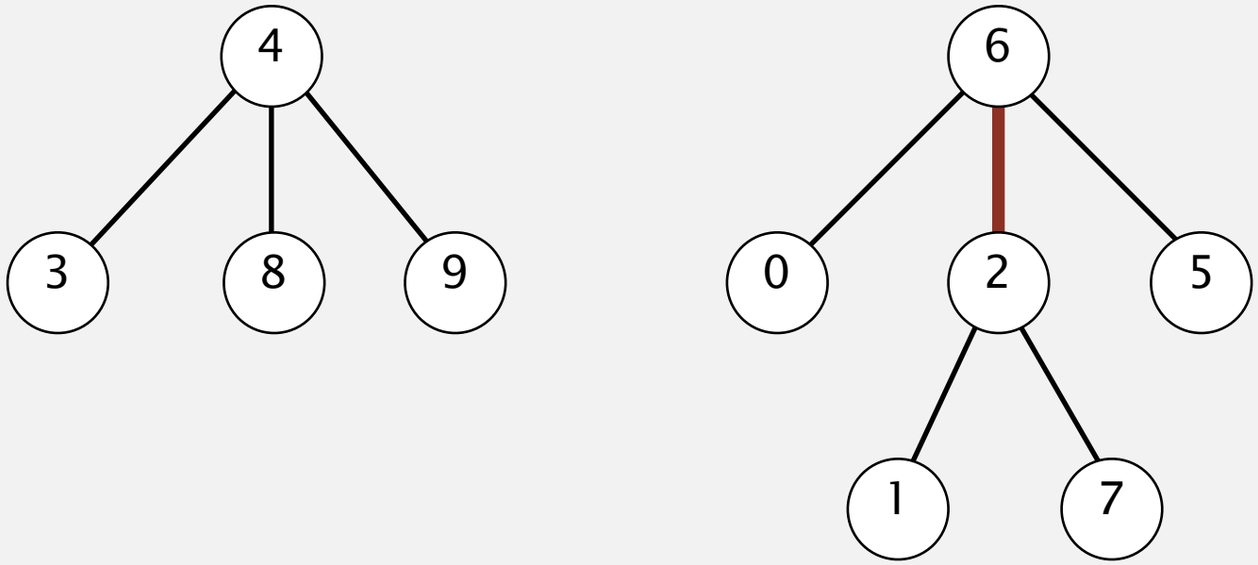
union(6, 1)



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	2	4	4	6	6	2	4	4

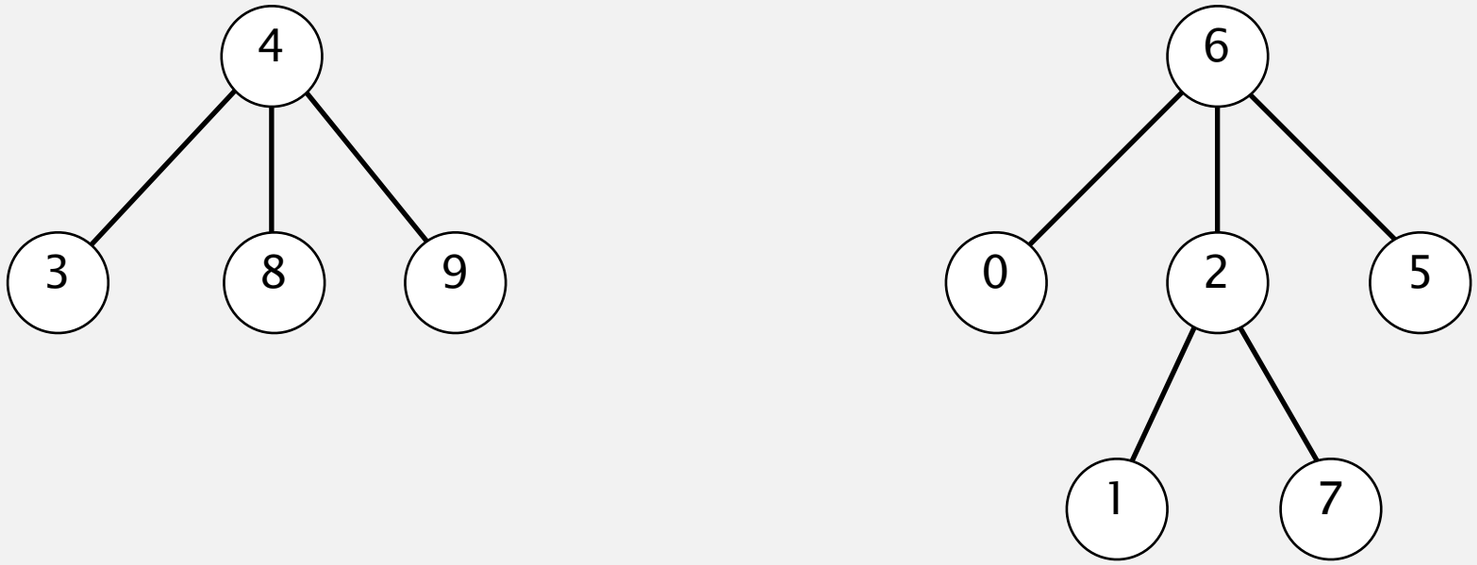
Weighted quick-union with path compression demo

union(6, 1)



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	4	6	6	2	4	4

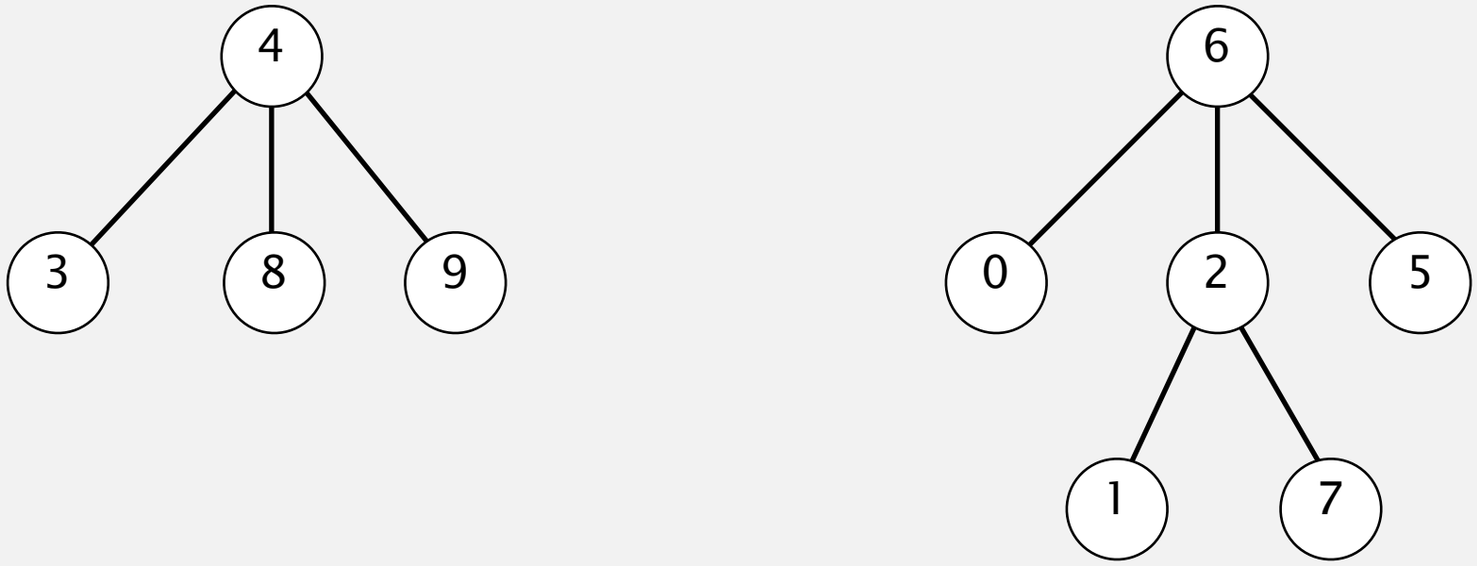
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	4	6	6	2	4	4

Weighted quick-union with path compression demo

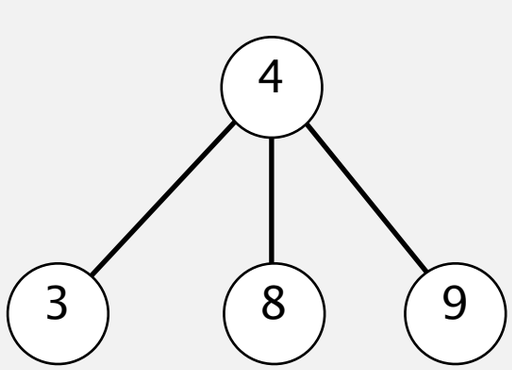
union(7, 3)



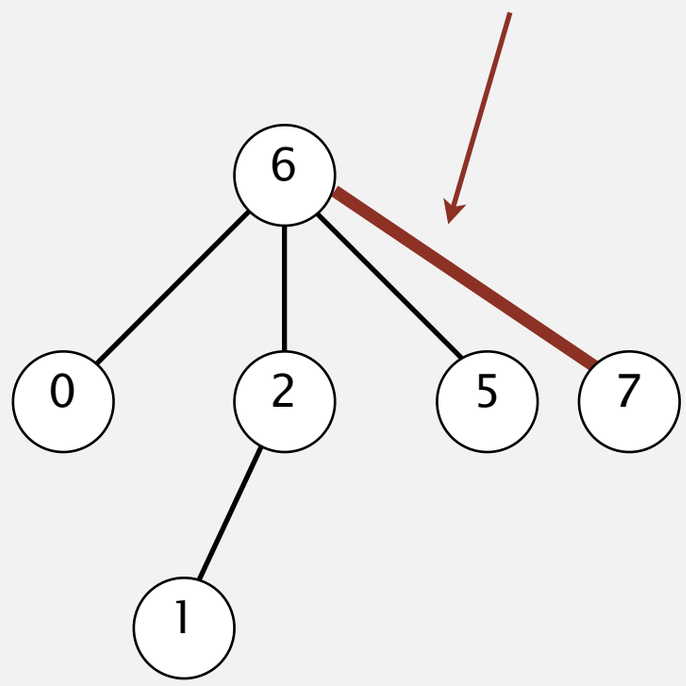
	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	4	6	6	2	4	4

Weighted quick-union with path compression demo

union(7, 3)



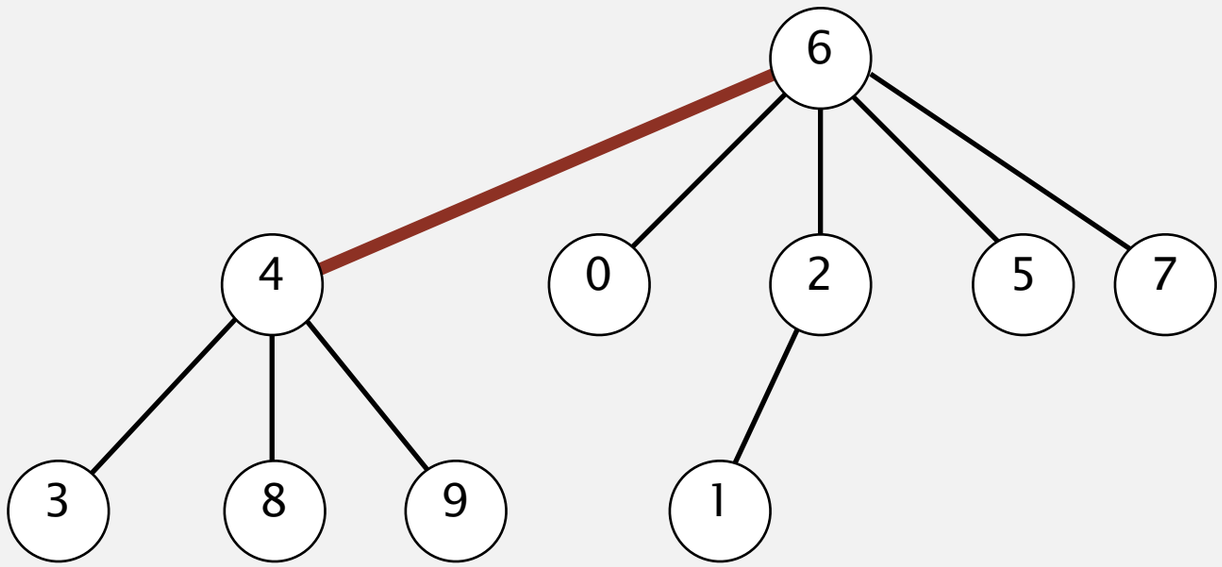
path compression:
make 7 point to 6



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	4	6	6	6	4	4

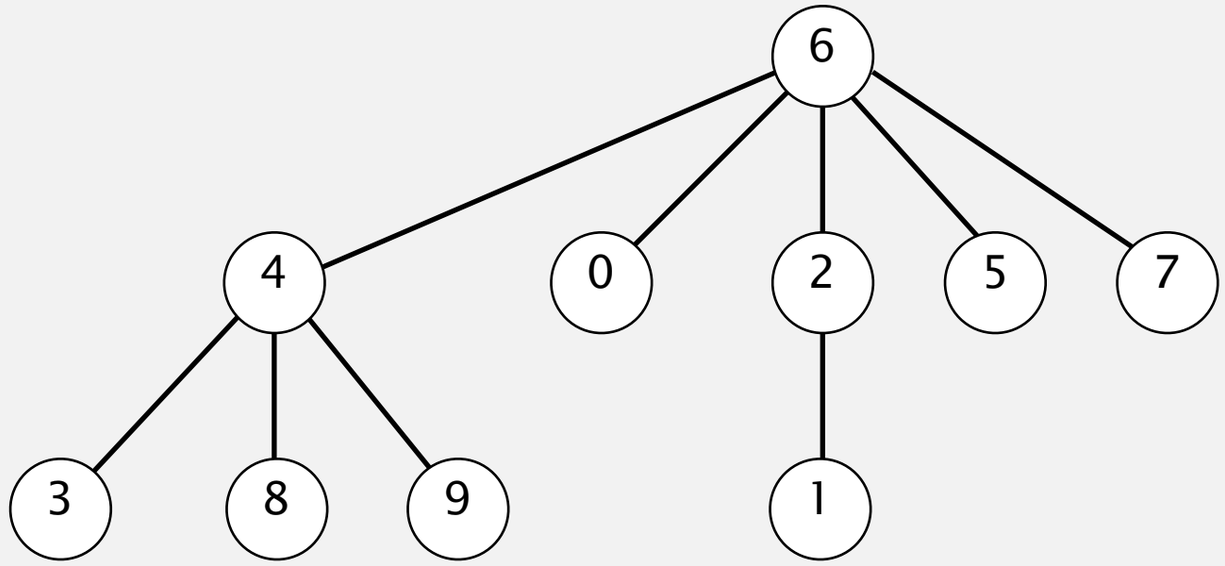
Weighted quick-union with path compression demo

union(7, 3)



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	6	6	6	6	4	4

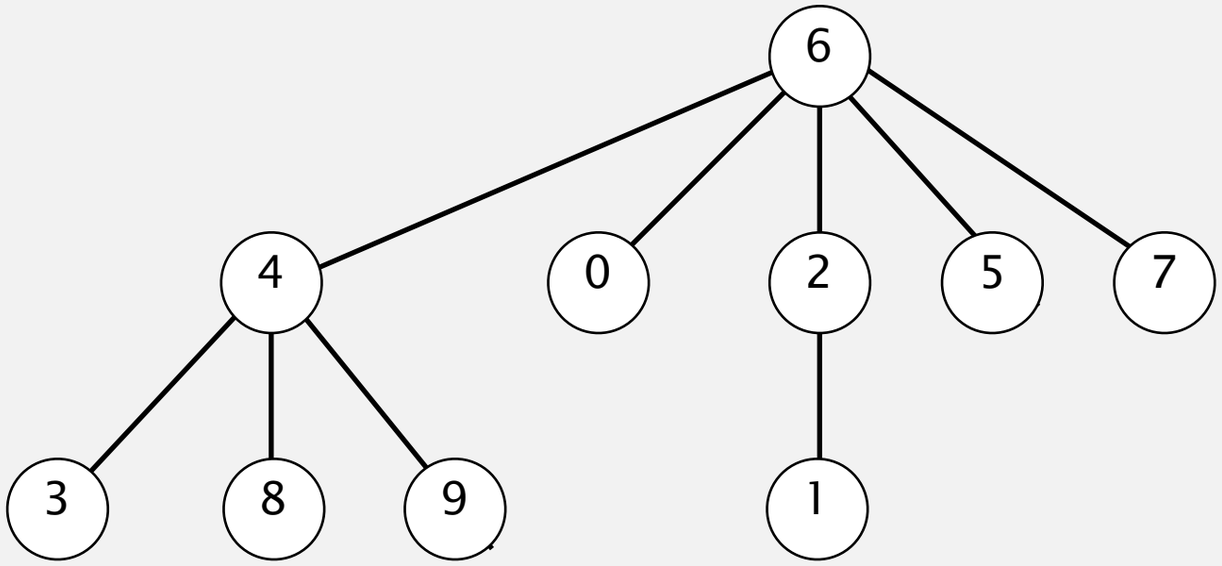
Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	6	6	6	6	4	4

Weighted quick-union with path compression demo

connected(9, 1) ✔

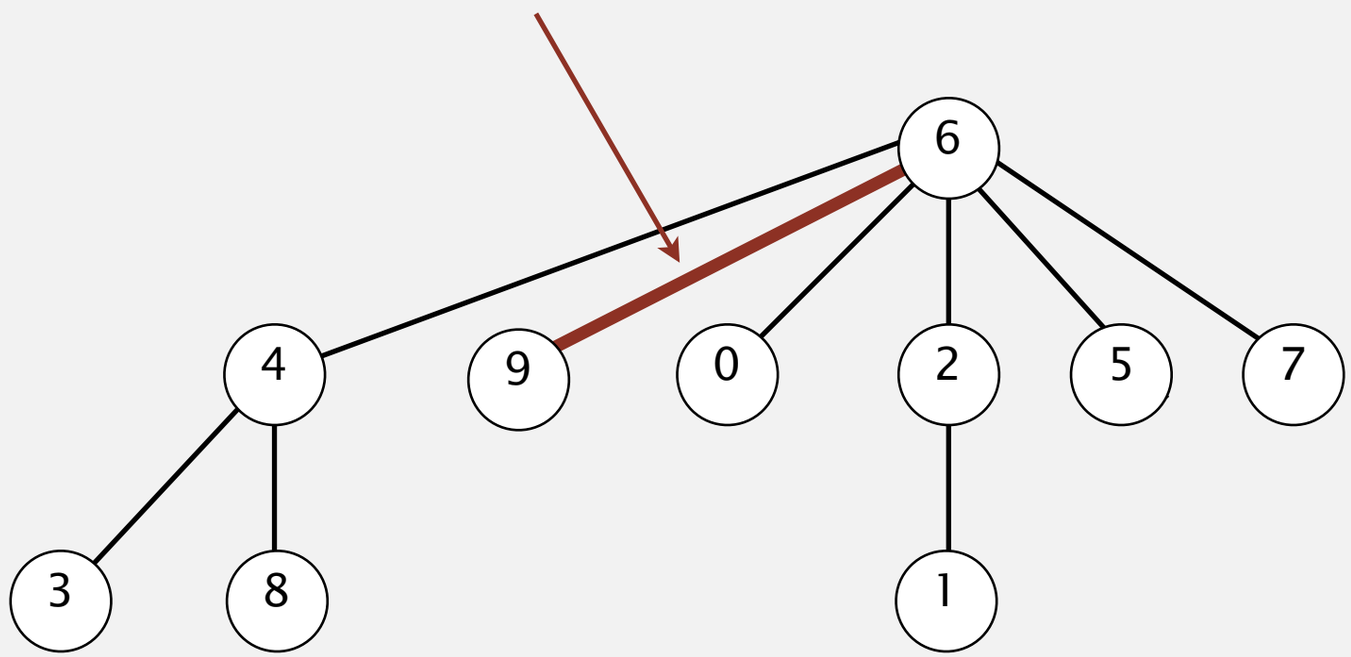


	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	6	6	6	6	4	4

Weighted quick-union with path compression demo

connected(9, 1) ✔

path compression:
make 9 point to 6

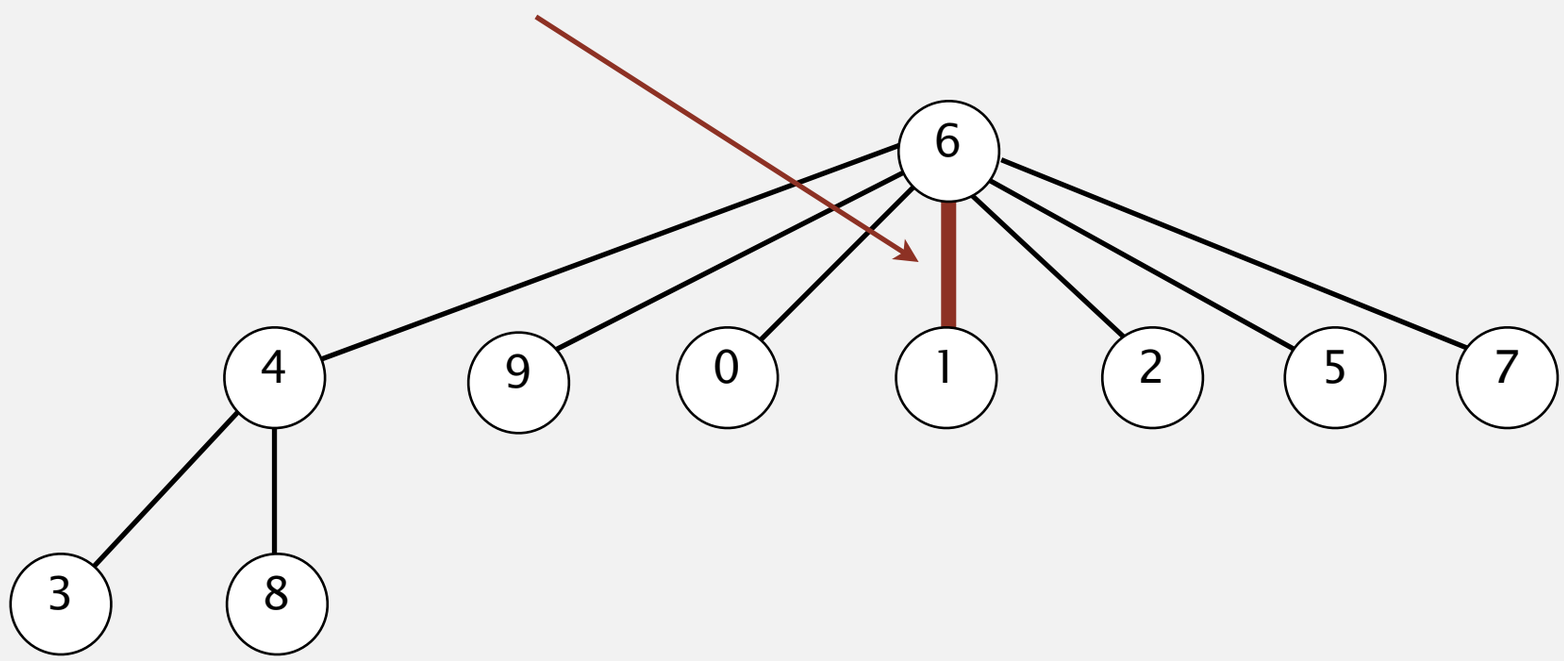


	0	1	2	3	4	5	6	7	8	9
id[]	6	2	6	4	6	6	6	6	4	6

Weighted quick-union with path compression demo

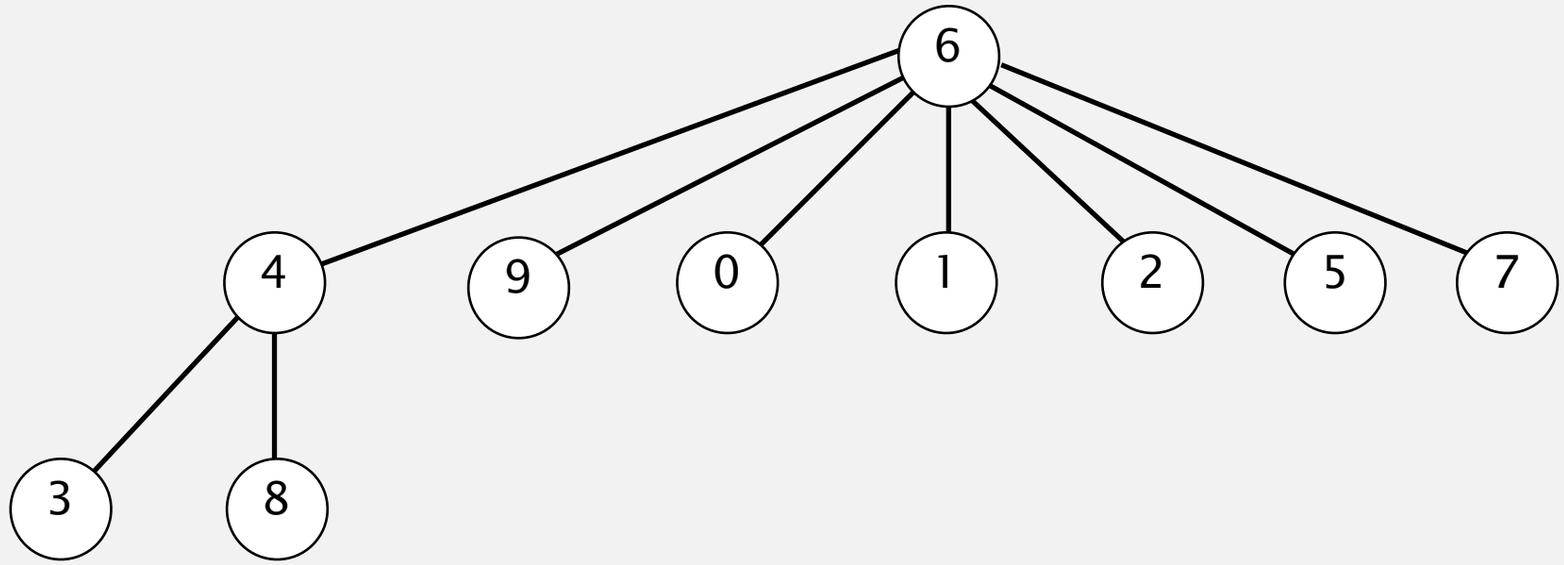
connected(9, 1) ✔

path compression:
make 1 point to 6



	0	1	2	3	4	5	6	7	8	9
id[]	6	6	6	4	6	6	6	6	4	6

Weighted quick-union with path compression demo



	0	1	2	3	4	5	6	7	8	9
id[]	6	6	6	4	6	6	6	6	4	6