Quick Union.

Union(9:0)

[0, 1, 2, 3, 4, 5, 6, 7, 8, 0]

Union (3:4)

[0, 1, 2, 4, 4, 5, 6, 7, 8, 0]

Union (5:8)

[0, 1, 2, 4, 4, 8, 6, 7, 8, 0]

Union (7:2)

[0, 1, 2, 4, 4, 8, 6, 2, 8, 0]

Union (2:1)

[0, 1, 1, 4, 4, 8, 6, 2, 8, 0]

Union ( 5:7)

[0, 1, 1, 4, 4, 7, 6, 2, 8, 0]

Union (0:3)

[3, 1, 1, 4, 4, 7, 6, 2, 8, 0]

Union (4:2)

[3, 1, 1, 4, 2, 7, 6, 2, 8, 0]

Quick Find.

Find(9:0)

[0, 1, 2, 3, 4, 5, 6, 7, 8, 0]

Find(3:4)

[0, 1, 2, 4, 4, 5, 6, 7, 8, 0]

Find(5:8)

[0, 1, 2, 4, 4, 8, 6, 7, 8, 0]

Find(7:2)

[0, 1, 2, 4, 4, 8, 6, 2, 8, 0]

Find(2:1)

[0, 1, 1, 4, 4, 8, 6, 1, 8, 0]

Find(8:1)

[0, 1, 1, 4, 4, 1, 6, 1, 1, 0]

Find(0:4)

[4, 1, 1, 4, 4, 1, 6, 1, 1, 4]

Find( 4:1)

[1, 1, 1, 1, 1, 1, 6, 1, 1, 1]

Weighted union

Array Size

0,1,2,3,4,5,6,7,8,9 1,1,1,1,1,1,1,1,1,1

Union(9-0)

9,1,2,3,4,5,6,7,8,9 1,1,1,1,1,1,1,1,1,2

Union(3-4)

9,1,2,3,3,5,6,7,8,9 1,1,1,2,1,1,1,1,1,2

Union(5-8)

9,1,2,3,3,5,6,7,5,9 1,1,1,2,1,2,1,1,1,2

Union(7-2)

9,1,7,3,3,5,6,7,5,9 1,1,1,2,1,2,1,2,1,2

Union(2-1)

9,7,7,3,3,5,6,7,5,9 1,1,1,2,1,2,1,3,1,2

Union(5-7)

9,7,7,3,3,7,6,7,5,9 1,1,1,2,1,2,1,5,1,2

Union(0-3)

9,7,7,9,3,7,6,7,5,9 1,1,1,2,1,2,1,5,1,4

Union(4-2)

9,7,7,9,3,7,6,7,5,9 1,1,1,2,1,2,1,7,1,4