

Linear Search

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

1	3	5	7	9	11	13	15	17	19	21	23	25	27	29
Searching for 2.														
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29
	3	5	7	9	11	13	15	17	19	21	23	25	27	29
		5	7	9	11	13	15	17	19	21	23	25	27	29
			7	9	11	13	15	17	19	21	23	25	27	29
				9	11	13	15	17	19	21	23	25	27	29
					11	13	15	17	19	21	23	25	27	29
						13	15	17	19	21	23	25	27	29
							15	17	19	21	23	25	27	29
								17	19	21	23	25	27	29
									19	21	23	25	27	29
										21	23	25	27	29
											23	25	27	29
												25	27	29
													27	29
														29

Number 2 NOT found.

Linear Search

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

1	3	5	7	9	11	13	15	17	19	21	23	25	27	29
Searching for 27.														
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29
	3	5	7	9	11	13	15	17	19	21	23	25	27	29
		5	7	9	11	13	15	17	19	21	23	25	27	29
			7	9	11	13	15	17	19	21	23	25	27	29
				9	11	13	15	17	19	21	23	25	27	29
					11	13	15	17	19	21	23	25	27	29
						13	15	17	19	21	23	25	27	29
							15	17	19	21	23	25	27	29
								17	19	21	23	25	27	29
									19	21	23	25	27	29
										21	23	25	27	29
											23	25	27	29
												25	27	29
													27	29

Number 27 found in position 13.

Binary Search

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Searching for 27.

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 left= 0 right=14
17 19 21 23 25 27 29 left= 8 right=14
25 27 29 left=12 right=14

Number 27 found in position 13.

Binary Search

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Searching for 2.

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 left= 0 right=14
1 3 5 7 9 11 13 left= 0 right= 6
1 3 5 left= 0 right= 2
1 left= 0 right= 0

Number 2 NOT found.

Quick Find

	0	1	2	3	4	5	6	7	8	9
(3- 2) !=	0	1	2	2	4	5	6	7	8	9
(6- 4) !=	0	1	2	2	4	5	4	7	8	9
(3- 4) !=	0	1	4	4	4	5	4	7	8	9
(5- 2) !=	0	1	4	4	4	4	4	7	8	9
(6- 2) =	0	1	4	4	4	4	4	7	8	9
(0- 8) !=	8	1	4	4	4	4	4	7	8	9
(9- 1) !=	8	1	4	4	4	4	4	7	8	1
(3- 8) !=	8	1	8	8	8	8	8	7	8	1
(6- 4) =	8	1	8	8	8	8	8	7	8	1
(0- 5) =	8	1	8	8	8	8	8	7	8	1

Quick Union

	0	1	2	3	4	5	6	7	8	9
(0- 2) !=	2	1	2	3	4	5	6	7	8	9
(2- 4) !=	2	1	4	3	4	5	6	7	8	9
(5- 1) !=	2	1	4	3	4	1	6	7	8	9
(4- 8) !=	2	1	4	3	8	1	6	7	8	9
(7- 3) !=	2	1	4	3	8	1	6	3	8	9
(5- 9) !=	2	9	4	3	8	1	6	3	8	9
(9- 4) !=	2	9	4	3	8	1	6	3	8	8
(5- 6) !=	2	9	4	3	8	1	6	3	6	8
(6- 3) !=	2	9	4	3	8	1	3	3	6	8
(3- 5) =	2	9	4	3	8	1	3	3	6	8

Quick Union Weighted

			0	1	2	3	4	5	6	7	8	9	
(	0-	2)	!=	0	1	0	3	4	5	6	7	8	9
(	2-	4)	!=	0	1	0	3	0	5	6	7	8	9
(	5-	1)	!=	0	5	0	3	0	5	6	7	8	9
(	4-	8)	!=	0	5	0	3	0	5	6	7	0	9
(	7-	3)	!=	0	5	0	7	0	5	6	7	0	9
(	5-	9)	!=	0	5	0	7	0	5	6	7	0	5
(	9-	4)	!=	0	5	0	7	0	0	6	7	0	5
(	5-	6)	!=	0	5	0	7	0	0	0	7	0	5
(	6-	3)	!=	0	5	0	7	0	0	0	0	0	5
(	3-	5)	=	0	5	0	7	0	0	0	0	0	5