

Depth first search (stack version)

1.

r: {}

Stack: 1

2.

r: 1

Stack: 2,6

3.

r: 1,2

Stack: 3,7,6

4.

r: 1,2,3

Stack: 4,8,7,6

5.

r: 1,2,3,4

Stack: 5,9,8,7,6

6.

r: 1,2,3,4,5

Stack: 10,9,8,7,6

7.

r: 1,2,3,4,5,10

Stack: 15,9,8,7,6

8.

r: 1,2,3,4,5,10,15

Stack: 14,20,9,8,7,6

9.

r: 1,2,3,4,5,10,15,14

Stack: 9,20,9,8,7,6

10.

r: 1,2,3,4,5,10,15,14,9

Stack: 20,9,8,7,6

11.

r: 1,2,3,4,5,10,15,14,9,20

Stack: 19,9,8,7,6

12.

r: 1,2,3,4,5,10,15,14,9,20,19

Stack: 24,19,9,8,7,6

13.

r: 1,2,3,4,5,10,15,14,9,20,19,24

Stack: 25,19,9,8,7,6

14.

R: 1,2,3,4,5,10,15,14,9,20,19,24,25

Stack: 19,9,8,7,6

Breadth first search (queue version)

1.

r: {}

Queue: 1

2.

r: 1

Queue: 2,6

3.

r: 1,6

Queue: 11,2

4.

r: 1,6,2

Queue: 3,7,11

5.

r: 1,6,2,11

Queue: 12,16,3,7

6.

r: 1,6,2,11,7

Queue: 12,16,3

7.

r: 1,6,2,11,7,3

Queue: 4,8,12,16

8.

r: 1,6,2,11,7,3,16

Queue: 21,4,8,12

9.

r: 1,6,2,11,7,3,16,12

Queue: 13,17,21,4,8

10.

r: 1,6,2,11,7,3,16,12,8

Queue: 13, 13,17,21,4

11.

r: 1,6,2,11,7,3,16,12,8,4

Queue: 5,9,13,13,17,21

12.

r: 1,6,2,11,7,3,16,12,8,4,21

Queue: 22,5,9,13, 13, 17

13.

r: 1,6,2,11,7,3,16,12,8,4,21,17

Queue: 22, 22,5,9,13, 13

14,

r: 1,6,2,11,7,3,16,12,8,4,21,17,13

Queue: 18,22,22,5,9, 13

15,

r: 1,6,2,11,7,3,16,12,8,4,21,17,13

Queue: 18,22,22,5,9

16.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9

Queue: 14,18,22,22,5

17.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5

Queue: 10,14,18,22,22

18.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22

Queue: 23,10,14,18,22

19. r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22

Queue: 23,10,14,18

20.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18

Queue: 23,10,14

21.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14

Queue: 15,23,10

22.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10

Queue: 15, 15,23

23.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10,23

Queue: 15, 15

24.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10,23,15

Queue: 20, 15

25.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10,23,15

Queue: 20

26.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10, 23,15,20

Queue: 19

27.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10, 23,15,20,19

Queue: 24

28.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10, 23,15,20,19,24

Queue: 25

29.

r: 1,6,2,11,7,3,16,12,8,4,21,17,13,9,5,22,18,14,10, 23,15,20,19,24,25

Queue: {}