**Line Tracking Algorithm**

Take instances:

Known that Reference Orientation = North

1. y > 0 && x > 0 (1, 1) 🡺 (3, 3) (nX = 3 – 1 = 2, nY = 3 – 1 = 2)
2. Rotate RIGHT (0) 🡺 (NORTH )
3. Execute nY (2)
4. Rotate RIGHT (90) 🡺 (EAST)
5. Execute nX (2)
6. Rotate LEFT (90) 🡺 (NORTH)
7. Y > 0 && X < 0 (3, 1) 🡺 (1, 3) (nX = 1 - 3 = -2, nY = 3 – 1 = 2)
8. Rotate RIGHT (0) 🡺 (NORTH)
9. Execute nY (2)
10. Rotate LEFT (90) 🡺 (WEST)
11. Execute nX (2)
12. Rotate RIGHT (90) 🡺 (NORTH)
13. Y > 0 && X = 0 (1, 1) 🡺 (1, 3) (nX = 1 - 1 = 0, nY = 3 – 1 = 2)
14. Rotate RIGHT (0) 🡺 (NORTH )
15. Execute nY (2)
16. Rotate RIGHT (0) 🡺 (NORTH)
17. Execute nX (0)
18. Rotate RIGHT (0) 🡺 (NORTH)
19. Y < 0 && X > 0 (1, 3) 🡺 (3, 1) (nX = 3 - 1 = 2, nY = 1 – 3 = -2)
20. Rotate RIGHT (180) 🡺 (SOUTH ).
21. Execute nY (2)
22. Rotate LEFT (90) 🡺 (EAST).
23. Execute nX (2)
24. Rotate LEFT (90) 🡺 (NORTH)
25. Y < 0 && X < 0
    1. Rotate RIGHT (180) 🡺 (SOUTH ).
    2. Execute nY (2)
    3. Rotate RIGHT (90) 🡺 (EAST).
    4. Execute nX (2)
    5. Rotate RIGHT (90) 🡺 (NORTH)
26. Y < 0 && X = 0
    1. Rotate RIGHT (180) 🡺 (SOUTH ).
    2. Execute nY (2)
    3. Rotate RIGHT (0) 🡺 (SOUTH).
    4. Execute nX (2)
    5. Rotate RIGHT (180) 🡺 (NORTH)
27. Y = 0 && X > 0
    1. Rotate RIGHT (0) 🡺 (SOUTH ).
    2. Execute nY (0)
    3. Rotate RIGHT (90) 🡺 (EAST).
    4. Execute nX (2)
    5. Rotate LEFT (90) 🡺 (NORTH)
28. Y = 0 && X < 0
    1. Rotate RIGHT (0) 🡺 (SOUTH ).
    2. Execute nY (0)
    3. Rotate LEFT (90) 🡺 (WAST).
    4. Execute nX (2)
    5. Rotate RIGHT (90) 🡺 (NORTH)