Q7\_Prithvi\_Gaming3

I-Lock

All of us have seen the great innovations of Steve Jobs. When he was alive, he had thought of a new pattern based lock for his I-pad. Although it was in the initial stages, it was quite innovative. The pattern had to be made without lifting our finger from the screen, we can move our finger only horizontally and vertically, we cannot retrace our path backwards but can go over the same dot multiple times. During the first turn, the dot turns Orange, during the second turn, the dot turns blue.

In the given few patterns, find the sum of all the dots where we change our direction.

Pattern 1

Solution:The sum is:22

Since the pattern is symmetric, we can start from the left or the right side,

Here, I have started from the right side. To show the pattern, I have used the following convention: ‘R’ implies going right, ‘L’ implies going left, ‘D’ implies going down and ‘U’ implies going up. The solution can be obtained by following this pattern:

1 D 4 D 1 R 2 R 3 R 1 U 1 U 4 L 3 L 2 L 1 D 4 R 3 D 2 R 3 U 2 R 1 U 4

Hence, the sum of dots where we changed the direction is:1+1+4+1+4+3+2+3+2+1 = 22

Pattern 2: