

Zonal Informatics Olympiad, 2020

Solutions

1. Number of points with Manhattan Distance at most S
 - (a) 41
 - (b) 221
 - (c) 1105
2. Maximum number of folding operations possible
 - (a) 4
 - (b) 9
 - (c) 19
3. Best sum of cutoffs for INOI qualification
 - (a) 45
 - (b) 28
 - (c) 77
4. Number of distinct integers in $\{\text{floor}(N/1), \text{floor}(N/2), \text{floor}(N/3), \dots, \text{floor}(N/N)\}$.
 - (a) 11
 - (b) 23
 - (c) 104

Marking

The question paper carries 80 marks, broken up into four questions of 20 marks each. Each question has three parts. *If you solve all three parts correctly, you get 20 marks for that question.* Otherwise, you get 5 marks for each part that you solve correctly.

Qualifying cutoff

- Std 12: 80
- Std 11: 80
- Std 10: 70
- Std 9: 60
- Std 8 or below: 50