## Generated solutions for problems 2 and 3

## 1 Solution for problem 2

```
======[ Solutions
   1=============
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [0, 0, 5, 0, 5, 3, 0, 2, [2, 2, 1, 1, 1, 3, 3, 3,
   1, 2, 2, 1, 1, 1, 3, 3, 3, 1, 5, 5, 5, 5, 5, 3, 3,
   3, 1, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4,
   4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
  1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [0, 0, 5, 4, 5, 0, 0, 2, [2, 2, 1, 1, 1, 4, 4, 4,
   4, 2, 2, 1, 1, 1, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 3,
   3, 3, 1, 5, 5, 5, 5, 5, 3, 3, 3, 1, 5, 5, 5, 5,
   3, 3, 3, 1], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [0, 0, 6, 0, 5, 3, 0, 2, [2, 2, 1, 1, 1, 1, 3, 3,
   3, 2, 2, 1, 1, 1, 1, 3, 3, 3, 5, 5, 5, 5, 5, 1, 3,
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   4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5,
    4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
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3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [0, 0, 6, 4, 5, 0, 0, 2, [2, 2, 1, 1, 1, 4, 4, 4,
   4, 2, 2, 1, 1, 1, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 1,
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   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [0, 5, 5, 0, 5, 3, 0, 0, [5, 5, 5, 5, 5, 3, 3, 3,
   1, 5, 5, 5, 5, 5, 3, 3, 1, 5, 5, 5, 5, 5, 3, 3,
   3, 1, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 5, 4,
   4, 4, 4, 2, 2, 1, 1, 1, 4, 4, 4, 4, 2, 2, 1, 1, 1,
    4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [0, 5, 5, 4, 5, 0, 0, 0, [5, 5, 5, 5, 5, 4, 4, 4,
   4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 3,
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   3, 3, 3, 1], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
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[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [0, 5, 6, 0, 5, 3, 0, 0, [5, 5, 5, 5, 5, 1, 3, 3,
   3, 5, 5, 5, 5, 5, 1, 3, 3, 3, 5, 5, 5, 5, 5, 1, 3,
            5, 5, 5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 4,
   4, 4, 4, 2, 2, 1, 1, 1, 4, 4, 4, 4, 2, 2, 1, 1, 1,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [0, 5, 6, 4, 5, 0, 0, 0, [5, 5, 5, 5, 5, 4, 4, 4,
   4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 1,
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   1, 3, 3, 3], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [1, 0, 5, 0, 5, 3, 0, 2, [1, 2, 2, 1, 1, 3, 3, 3,
   1, 1, 2, 2, 1, 1, 3, 3, 3, 1, 5, 5, 5, 5, 5, 3, 3,
   3, 1, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4,
   4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [1, 0, 5, 4, 5, 0, 0, 2, [1, 2, 2, 1, 1, 4, 4, 4,
   4, 1, 2, 2, 1, 1, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 3,
   3, 3, 1, 5, 5, 5, 5, 5, 3, 3, 3, 1, 5, 5, 5, 5,
    3, 3, 3, 1], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
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2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
  1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [1, 0, 6, 0, 5, 3, 0, 2, [1, 2, 2, 1, 1, 1, 3, 3,
   3, 1, 2, 2, 1, 1, 1, 3, 3, 3, 5, 5, 5, 5, 5, 1, 3,
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   4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [1, 0, 6, 4, 5, 0, 0, 2, [1, 2, 2, 1, 1, 4, 4, 4,
   4, 1, 2, 2, 1, 1, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 1,
    3, 3, 3, 5, 5, 5, 5, 5, 1, 3, 3, 3, 5, 5, 5, 5, 5,
   1, 3, 3, 3], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
  1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [1, 5, 5, 0, 5, 3, 0, 0, [5, 5, 5, 5, 5, 3, 3, 3,
   1, 5, 5, 5, 5, 5, 3, 3, 1, 5, 5, 5, 5, 5, 3, 3,
   3, 1, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4,
   4, 4, 4, 1, 2, 2, 1, 1, 4, 4, 4, 4, 1, 2, 2, 1, 1,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
```

```
= [1, 5, 5, 4, 5, 0, 0, 0, [5, 5, 5, 5, 5, 4, 4, 4,
   4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 5, 4, 4,
    4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 3,
    3, 3, 1, 1, 2, 2, 1, 1, 3, 3, 3, 1, 1, 2, 2, 1, 1,
   3, 3, 3, 1], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [1, 5, 6, 0, 5, 3, 0, 0, [5, 5, 5, 5, 5, 1, 3, 3,
   3, 5, 5, 5, 5, 5, 1, 3, 3, 5, 5, 5, 5, 5, 1, 3,
   3, 3, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 4,
   4, 4, 4, 1, 2, 2, 1, 1, 4, 4, 4, 4, 1, 2, 2, 1, 1,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [1, 5, 6, 4, 5, 0, 0, 0, [5, 5, 5, 5, 5, 4, 4, 4,
   4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 5, 4, 4,
   4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 1,
   3, 3, 3, 1, 2, 2, 1, 1, 1, 3, 3, 3, 1, 2, 2, 1, 1,
    1, 3, 3, 3], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
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   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [2, 0, 5, 0, 5, 3, 0, 2, [1, 1, 2, 2, 1, 3, 3, 3,
   1, 1, 1, 2, 2, 1, 3, 3, 3, 1, 5, 5, 5, 5, 5, 3, 3,
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   4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   4, 4, 4, 4], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
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    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [2, 0, 5, 4, 5, 0, 0, 2, [1, 1, 2, 2, 1, 4, 4, 4,
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[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
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```
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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   1, 3, 3, 3, 1, 1, 1, 2, 2, 1, 3, 3, 3, 1, 5, 5, 5,
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   5, 5, 5, 5], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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   5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 3, 3, 3, 1, 5, 5,
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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    1, 4, 4, 4, 4, 1, 1, 2, 2, 1, 4, 4, 4, 4, 5, 5, 5,
   5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 1, 3, 3, 3, 5, 5,
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   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
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    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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   5, 3, 3, 3, 1, 5, 5, 5, 5, 5, 3, 3, 3, 1, 5, 5, 5,
   5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5,
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   1, 2, 2, 1], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [6, 5, 0, 4, 0, 0, 4, 0, [4, 4, 4, 4, 5, 5, 5, 5,
   5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5,
   5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 3, 3, 3, 1, 5, 5,
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
  1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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   5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5,
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   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
```

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    5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 1, 3, 3, 3, 5, 5,
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   1, 2, 2, 1], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
  3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [7, 0, 0, 4, 0, 0, 4, 2, [4, 4, 4, 4, 1, 1, 1, 2,
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [7, 0, 1, 0, 0, 3, 4, 2, [1, 3, 3, 3, 1, 1, 1, 2,
   2, 1, 3, 3, 3, 1, 1, 1, 2, 2, 1, 3, 3, 3, 5, 5, 5,
    5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5,
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   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
   2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
```

```
1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
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   2, 4, 4, 4, 4, 1, 1, 1, 2, 2, 4, 4, 4, 4, 5, 5, 5,
    5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 1, 3, 3, 3, 5, 5,
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [7, 5, 0, 0, 0, 3, 4, 0, [3, 3, 3, 1, 5, 5, 5,
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   5, 5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5,
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   1, 1, 2, 2], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
   3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1,
  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
   1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
    [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
   1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3,
  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
   = [7, 5, 0, 4, 0, 0, 4, 0, [4, 4, 4, 4, 5, 5, 5, 5,
   5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 5, 5, 5,
   5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 3, 3, 3, 1, 5, 5,
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   1, 1, 2, 2], [0, 1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2,
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
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    [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
   5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [7, 5, 1, 0, 0, 3, 4, 0, [1, 3, 3, 3, 5, 5, 5, 5,
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```
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
  1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
   [0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5,
  5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
[S2C, S2R, S3C, S3R, S4C, S4R, S5C, S5R, Z, Col, Row]
  = [7, 5, 1, 4, 0, 0, 4, 0, [4, 4, 4, 4, 5, 5, 5, 5,
   5, 4, 4, 4, 5, 5, 5, 5, 5, 4, 4, 4, 4, 5, 5, 5,
   5, 5, 4, 4, 4, 4, 5, 5, 5, 5, 5, 1, 3, 3, 3, 5, 5,
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  2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8, 0,
  1, 2, 3, 4, 5, 6, 7, 8, 0, 1, 2, 3, 4, 5, 6, 7, 8],
   [0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1,
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  5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6]
======[ End Solutions
   ]=============
```

## 2 Solution for problem 3

```
======[ Solutions
  ]-----
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 0, 4, 0, 4, 2, 0, 3, [0, 1, 2, 3, 4, 5, 6, 0,
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   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
  1, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3], [1,
  1, 1, 1, 2, 2, 0, 1, 1, 1, 1, 2, 2, 0, 1, 1, 1, 1,
  3, 3, 3, 4, 4, 4, 4, 4, 0, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 0, 4, 0, 4, 2, 1, 3, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
  1, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3], [1,
  1, 1, 1, 2, 2, 0, 1, 1, 1, 1, 2, 2, 0, 1, 1, 1, 1,
  3, 3, 3, 0, 4, 4, 4, 4, 4, 0]]
```

```
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
  1, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3], [1,
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   3, 3, 3, 0, 0, 4, 4, 4, 4, 4]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 0, 4, 1, 4, 0, 0, 3, [0, 1, 2, 3, 4, 5, 6, 0,
    1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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  1, 1, 1, 3, 3, 3, 1, 1, 1, 1, 2, 2, 0, 1, 1, 1, 1,
  2, 2, 0, 4, 4, 4, 4, 4, 0, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
   = [0, 0, 4, 1, 4, 0, 1, 3, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
   1, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3], [1,
   1, 1, 1, 3, 3, 3, 1, 1, 1, 1, 2, 2, 0, 1, 1, 1, 1,
  2, 2, 0, 0, 4, 4, 4, 4, 4, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 0, 4, 1, 4, 0, 2, 3, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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   1, 1, 1, 3, 3, 3, 1, 1, 1, 1, 2, 2, 0, 1, 1, 1, 1,
  2, 2, 0, 0, 0, 4, 4, 4, 4, 4]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
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  3, 3, 3, 4, 4, 4, 4, 4, 0, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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   3, 3, 3, 0, 4, 4, 4, 4, 4, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
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  3, 3, 3, 0, 0, 4, 4, 4, 4, 4]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 0, 5, 1, 4, 0, 0, 3, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
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   0, 2, 2, 4, 4, 4, 4, 4, 0, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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  0, 2, 2, 0, 4, 4, 4, 4, 4, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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  0, 2, 2, 0, 0, 4, 4, 4, 4, 4]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 0, 5, 2, 4, 0, 0, 3, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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   0, 2, 2, 4, 4, 4, 4, 4, 2, 2]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
   = [0, 0, 5, 2, 4, 1, 0, 3, [0, 1, 2, 3, 4, 5, 6, 0,
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  0, 2, 2, 4, 4, 4, 4, 4, 2, 2]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 1, 4, 1, 4, 3, 0, 0, [0, 1, 2, 3, 4, 5, 6, 0,
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   2, 2, 0, 1, 1, 1, 1, 3, 3, 3]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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  2, 2, 0, 1, 1, 1, 1, 3, 3, 3]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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  2, 2, 0, 1, 1, 1, 1, 3, 3, 3]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 1, 4, 2, 4, 1, 0, 0, [0, 1, 2, 3, 4, 5, 6, 0,
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  2, 2, 0, 1, 1, 1, 1, 2, 2, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 1, 4, 2, 4, 1, 1, 0, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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   2, 2, 0, 1, 1, 1, 1, 2, 2, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
  = [0, 1, 4, 2, 4, 1, 2, 0, [0, 1, 2, 3, 4, 5, 6, 0,
   1, 2, 3, 4, 5, 6, 0, 1, 2, 3, 4, 5, 6, 0, 1, 2, 3,
   4, 5, 6], [0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1,
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   3, 3, 3, 1, 1, 1, 1, 0, 0, 0]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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4, 4, 4, 4, 2, 2, 1, 1, 1, 1, 0, 2, 2, 1, 1, 1, 1,
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   0, 2, 2, 1, 1, 1, 1, 3, 3, 3]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   0, 2, 2, 1, 1, 1, 1, 3, 3, 3]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   0, 2, 2, 1, 1, 1, 1, 3, 3, 3]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   0, 2, 2, 1, 1, 1, 1, 0, 2, 2]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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   1, 1, 1, 0, 0, 4, 4, 4, 4, 4]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
   = [3, 0, 0, 1, 0, 0, 2, 3, [0, 1, 2, 3, 4, 5, 6, 0,
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   1, 1, 1, 0, 0, 4, 4, 4, 4, 4]]
[S1C, S1R, S2C, S2R, S3C, S3R, S4C, S4R, Col, Row, Z]
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