# 1.NBT Number Square

## Task
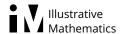
### Part 1

The teacher explains the Number Square:

- *In this big number square, the numbers in the little individual boxes get bigger by one as we travel to the right.*
  - *When we get to the end of a row, the next number is found at the start of the line below.*
    - *Notice how the numbers get smaller by one as we travel to the left.*
- *When we get to the beginning of a row, the previous number is found at the end of the line above.*
  - *The first number on this number square is $1$ and the last number is $100$.*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Class discussion (think and share) and/or individual work (e.g. on white boards) given orally by the teacher:

a. What number is to the right of 78? How does that number compare to 78?

b. What number is three to the right of 34? How does that number compare to 34?

c. What number is five to the left of 18? How does that number compare to 18?

d. Start at 13 and move 11 steps forward (starting to the right) on the number square; where do we end up? What did we have to do after seven steps?

**Illustrative Mathematics**

**Part 2**

If need be, the teacher can review the basics of the 1-100 Number Square.  Class discussion and/or individual work proceeds through the following types of questions.

a. Find the number $12 - 5$ by starting at $12$ on the number square and counting back $5$ steps, moving to the left and going up to the previous row as needed.

b. Find the sum $37 + 10$ by starting at $37$ on the number square and counting forward $10$ spaces, moving to the right and going down to the next row as needed.

c. Find the difference $37 - 10$ by starting at $37$ on the number square and counting back $10$ spaces, moving to the left and going up to the previous row as needed.

**Part 3**

If needed, the teacher can review basic adding and subtracting on the 1-100 Number Square.  Class discussion and/or individual work proceeds through the following types of questions.

a. Find the following sums using the number square:

- $2 + 10$
- $19 + 10$
- $20 + 10$
- $74 + 10$
- $88 + 10$

b. Where on the number square is the result of adding ten to a number? Use your answers above to help you.

c. What happens when we add ten to a number?  How would you explain what is happening?

d. Find the following differences using the number square.

- $13 - 10$
- $39 - 10$
- $40 - 10$
- $65 - 10$

- $92 - 10$

e. Where on the number square is the result of subtracting ten from a number? Use your answers above to help you.

f. What happens when we subtract ten from a number? How would you explain what is happening?

**Extension**

a. Find the following sums without any tools (pencil and paper, blocks, or the number square). Use the number square to check your work.

- $38 + 10$
- $23 + 10$
- $51 + 10$
- $77 + 10$
- $5 + 10$

b. Find the following differences without any tools (pencil and paper, blocks, or the number square). Use the number square to check your work.

- $45 - 10$
- $31 - 10$
- $60 - 10$
- $78 - 10$
- $12 - 10$