

100s Chart & Number Grid Puzzles

100s Chart

Every classroom is to be equipped with a 100s chart (template below) that is easily viewed by all students. Introduce the chart by asking students questions such as the following:

- What number patterns do you see on the chart?
- How do the numbers change as you move horizontally across the chart? Vertically?
- Which place value changes as you move horizontally? Which place value changes as you move vertically?

Select a number on the chart. Ask:

- What is one more than ___? What is one less than ___?
- What is two more than ___? What is two less than ___?
- What is ten more than ___? How do you know? *(Some students will need to count the squares to verify the move of ten. This verification may need to be repeated many times before it becomes a given fact that moving in a vertical fashion down the chart is a means of adding 10 to the original number.)*
- What mathematical operation are we using when we go down, forward or to the right on the chart?
- Repeat this line of questioning with different numbers.

Do not introduce subtracting 10 until students are secure with the idea of adding 10 without counting each individual square. Once secure, ask:

- What is ten less than ___? How do you know?
- What is ten fewer than ___? How do you know?
- What mathematical operation are we using when we go up, backward or the left on the chart?

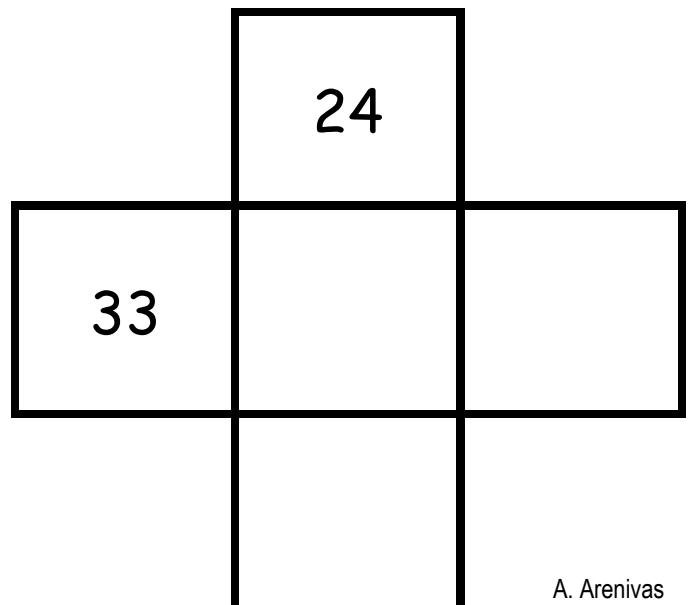
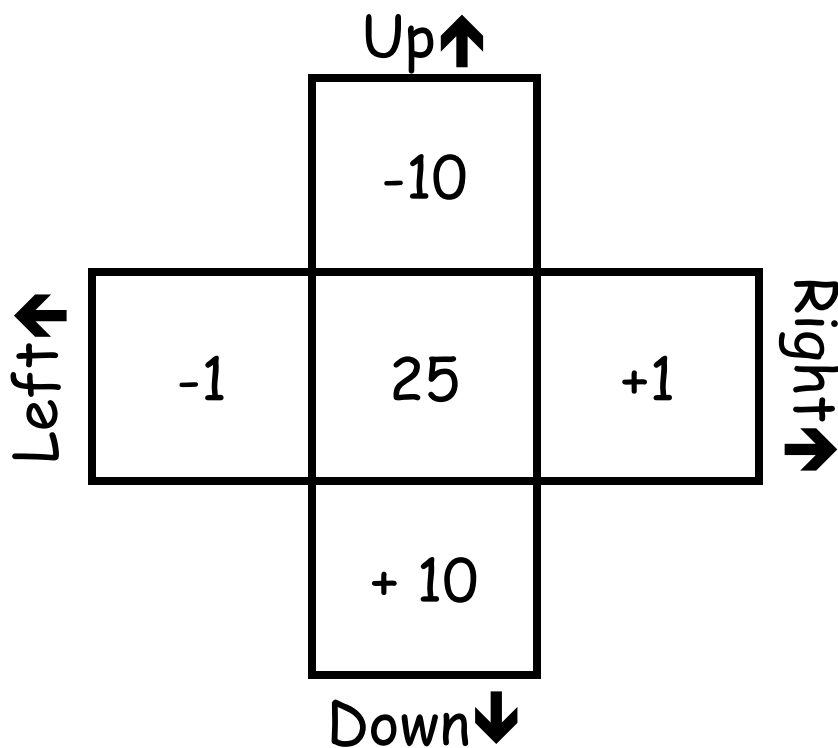
Students are to be secure with moving on the 100s chart without counting before Number Grid Puzzles are introduced to extend the learning.

100s Chart template follows.

Number Grid Puzzles

Reproduce the following template manually or by using a poster machine. Laminate the finished product. To implement the routine, write numbers in the grid that students will use as clues to determine the missing numbers. Begin providing numbers that require students to move forward or to the right (adding 1) and moving down (adding 10). As students' level of proficiency increases with adding 1 and 10, place numbers that require students to subtract 1 and 10 to determine the missing numbers. See the example below.

The Number Grid Puzzle poster is intentionally not labeled with a title. The poster can be turned in a 360° rotation to create different puzzle formations.



100s Chart

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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

