

3.0A Symmetry of the addition table

Task

Below is a table showing how to add numbers from 1 to 3:

+	1	2	3
1	2	3	4
2	3	4	5
3	4	5	6

Cut out the table and fold it over the dotted line. Notice that the blue squares match up and so do the orange squares. Notice that the squares that match up have the same numbers in them. We say that the squares that match up when you fold along the line are "mirror images" of each other.

The table below shows how to add numbers from 1 to 9. Two squares are shaded blue and two are green:

+	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10
2	3	4	5	6	7	8	9	10	11
3	4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12	13
5	6	7	8	9	10	11	12	13	14
6	7	8	9	10	11	12	13	14	15
7	8	9	10	11	12	13	14	15	16
8	9	10	11	12	13	14	15	16	17
9	10	11	12	13	14	15	16	17	18

- a. Are the blue squares mirror images of each other? Explain why the numbers in the blue squares are equal.
- b. Are the green squares mirror images of each other? Explain why the numbers in the green squares are equal.
- c. Shade the rest of the mirror image squares with the same color. Why are the mirror image numbers always equal?



3.OA Symmetry of the addition table
Typeset May 4, 2016 at 22:41:27. Licensed by Illustrative Mathematics under a
Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License .