

Spatial Multiplication Table

A large grid for spatial multiplication, consisting of 10 columns and 10 rows of small squares, with thicker lines separating the columns and rows.

Multiplication Tables

1. In the 2×3 multiplication table below, the numbers 2, 3, 5, 7 and 11 are used to replace the variables a, b, c, d , and e . The six products are then found, and the sum of the products is calculated. What is the maximum possible sum of the six products?

| | | | |
|----------|----------|----------|----------|
| x | a | b | c |
| d | | | |
| e | | | |

2. What is the *minimum* possible sum of the six products?
3. A standard 9×9 multiplication table is shown. What is the sum of all 81 entries?

| | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |