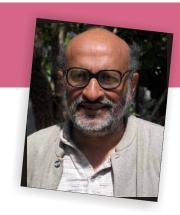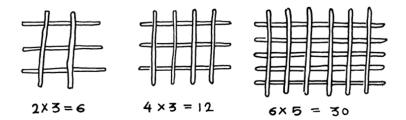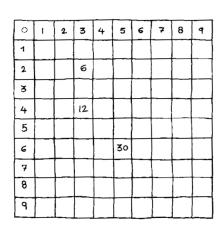# 20 | Broomstick Tables
Arvind Gupta

This article is inspired by the fascinating work of Mr. P. K. Srinivasan of Chennai. Tables are often learnt by rote. This repetitive drill might help quick recall but it kills the whole joy of learning. With only 18 equal length broomsticks children can discover the whole world of tables.
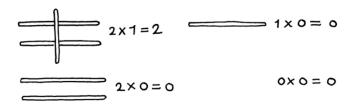
1. Lay one broomstick and place another one across it. At how many points do they meet? Obviously, one. So, 1 x l = 1. If two vertical broomsticks are placed criss-cross over three horizontal broomsticks then they have six junctions. So, 2 x 3 = 6.
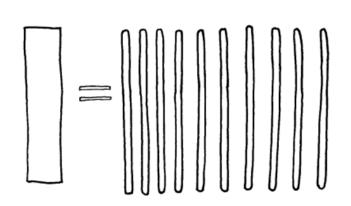

2×3=6   4×3 = 12   6×5 = 30

2. Children can make a 0 to 9 matrix on a square ruled copy and make their own table sheet by placing broomsticks criss-cross and counting the number of junctions. So, children who have learnt to count should be encouraged to make their own table sheets.

3. This picture shows how the abstract concept of multiplication by zero can be concretised.
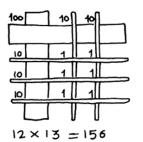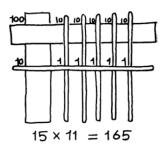

2 x 1 = 2   1 x 0 = 0

2 × 0 = 0   0 × 0 = 0

4. Multiplication of two digit numbers would mean counting too many junctions. So, ten broomsticks can be represented by one card strip.

5. Criss-cross of two strips will be 10 x 10 = 100, while that of a strip and a broomstick will be 10 x 1 = 10. Add up the sum of all the junctions to get the multiplication value.

12 × 13 = 156

15 × 11 = 165

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