

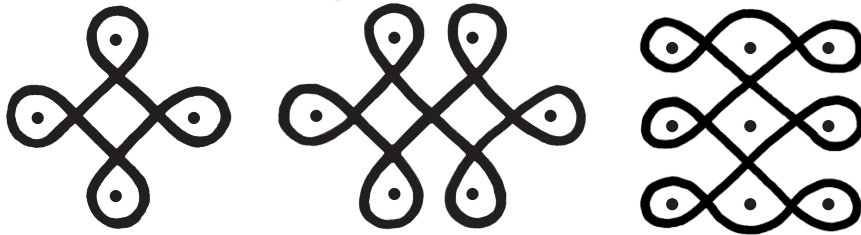
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Pulli Kolams

9 Pulli Kolams to trace and draw in the Indian tradition

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Pulli Kolams

About Pulli Kolams	Pages 3-4
How to make it	Page 5
Kolam with 4 Pullis	Pages 6-8
Kolam with 6 Pullis	Pages 9-11
Kolam with 9 Pullis A	Pages 12-14
Kolam with 9 Pullis B	Pages 15-17
Kolam with 9 Pullis C	Pages 18-20
Kolam with 13 Pullis	Pages 21-23
Kolam with 15 Pullis	Pages 24-26
Kolam with 16 Pullis	Pages 27-29
Kolam with 25 Pullis	Pages 30-32
Bonus sheet: Kolam with 441 Pullis	Page 33

PRINT SETTINGS

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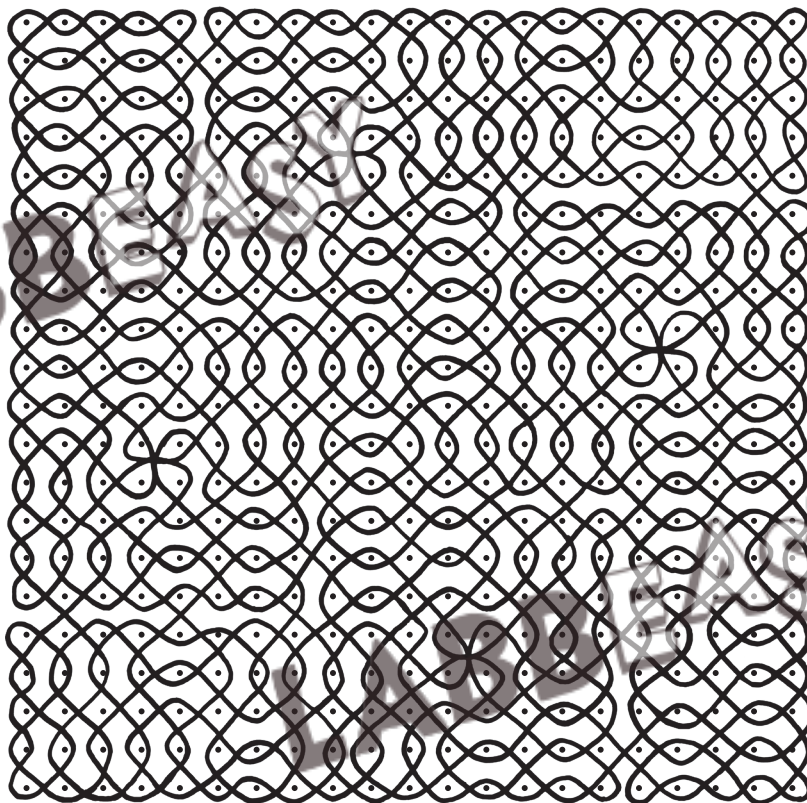
INTRODUCTION

Pulli Kolams

Mathematical Patterns for Ants

In India, many women create patterns by sprinkling rice flour on the freshly cleaned floor outside their front door early in the morning. To do this, they let the rice flour trickle through their index and middle fingers while they measure out the amount with their thumbs. Such a pattern is called a Kolam in southern India and Rangoli in northern India. Kolams are thought to bring good luck and prosperity to homes or to welcome visitors. At the same time, they are meant to remind us that we humans are not alone on this planet, but that there are many other living things smaller and weaker than we are: Indeed, the rice flour used to draw Kolams serves as food for small animals such as ants, birds and rodents. The ritual of renewing Kolams in the morning is still part of daily life for many women while others only draw them on holidays.

Young girls learn and adopt the ritual from the women. Originally, Kolams were intended to promote mental disciplines such as concentration and contemplation. Mastery of this art form is still considered a sign of grace, skill, mental discipline and concentration. There are some women who can draw Kolams that are 3 x 3 meters from memory.



Kolam with 441 Pullis

Each Kolam is based on a mathematical 'framework', an imaginary uniform grid. Visible auxiliary points are placed at equal intervals within this imaginary grid. In Tamil, the language of the southern Indian state of Tamil Nadu, these points are called 'Pullis'. Once the dots are set, you draw around them - without stopping - in a continuous, looped line called a 'Neli'. These Kolams with a never-ending, single line loop are called Pulli Kolams. For women and girls in India, the dots symbolize the tasks of life, while the artful lines represent the journey through life.

The simplest Pulli Kolam consists of two Pullis and the single line looks like an 8 on its side.



This single line loop can be drawn again and again 'to infinity' without ever lifting the pencil. The more Pullis a Kolam has, the more complicated it is and the more you have to concentrate while drawing.

Mathematics Without Formulas

The tradition of Kolam is believed to be several thousand years old, because it is mentioned in ancient texts. Upon closer inspection, a Kolam is not just a collection of points and lines, but real mathematics with highly complex systematic principles. One could say: Kolams are mathematics without formulas. This is a different kind of mathematics- namely, ethnomathematics. This is when we understand mathematical ideas without using classic mathematics.

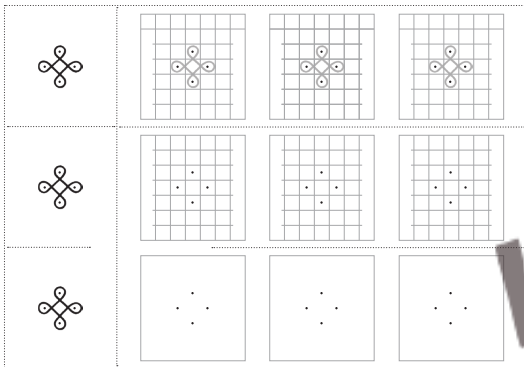
Drawing a Kolam is fascinating and fun- if you know how. From the infinite number of possibilities, we have chosen the simplest Kolams and adapted them for children. As a substitute to the oral tradition from generation to generation, we have created Kolam worksheets from which children can learn to draw Kolams in a way that's fun and practice them again and again (preferably until they can draw them from memory- just like children in India). Drawing Kolams promotes concentration and trains memory and hand-eye coordination.

HOW TO MAKE IT

Pulli Kolams

This material contains 9 different Kolams, from easy (4 Pullis) to difficult (25 Pullis). There are three worksheets per Kolam.

WORKSHEET 1



This worksheet has three series of exercises and is used for motor practice of Kolam.

1. Tracing exercise

Trace the light gray lines in each of the three practice Kolams with a pencil without lifting it.

2. Exercise with grid

Here, you draw the Kolam without lifting the pencil. The Pullis and the grid are there for guidance.

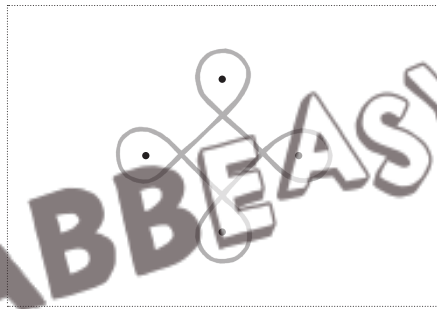
3. Exercise without grid

Draw the Kolam without lifting the pencil using only the Pullis in the templates to help, as they do in India.

TIP

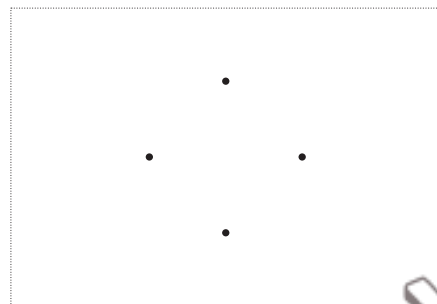
It's best to always start drawing the line in the same place. You can color your Kolams once finished, which looks especially nice.

WORKSHEET 2



This worksheet is intended for large-scale tracing. So repeated tracing doesn't become too boring, you can trace the line with crayons using the eight colors of the rainbow. You could also trace with your index finger, or for smaller children, with a little toy car.

WORKSHEET 3



Once you can correctly draw a Kolam, you can draw it from memory around the Pullis in large-scale and hang up your art work.