

Zine Machine – A Tinkering Kit Involving Math and Making

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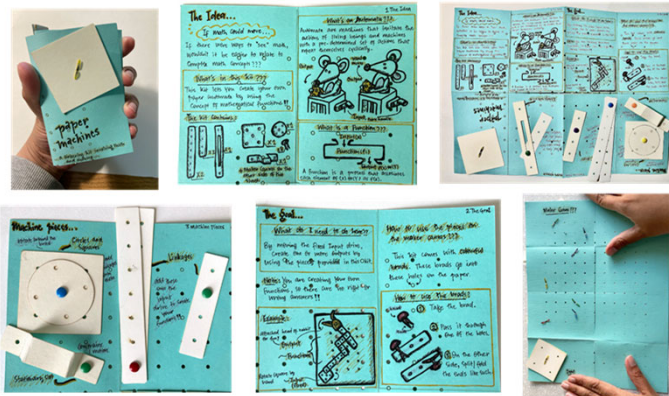
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WHAT

Zine Machines are a paper-based math tinkering kit that use two-dimensional mechanical movements to enable physical sense-making about mathematical functions. It offers an accessible and creative tangible medium of interaction.

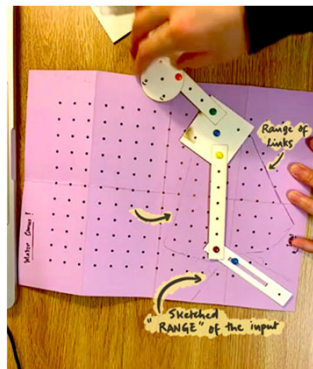
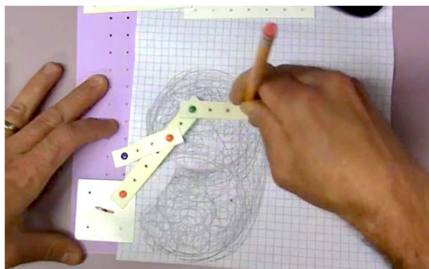
HOW

With Zine Machine, learners can represent the mathematical concepts of functions, inputs, and outputs embodied in mechanical movements. The zine provides instruction as a folded booklet and opens up to a flat sheet to serve as the maker canvas.



THE GOAL

The goal is to tinker with arrangements of the pieces provided in the zine to drive one or more outputs using a fixed input.



WHY

With an intention of tangibilizing mathematics and to respond to the dearth of algebra-based math manipulatives, Zine Machine was designed to facilitate creative mathematical tinkering using simple mechanical movements and accessible materials like paper.

MATHEMATICAL CONNECTIONS

Zine Machine draws from the four powerful ideas in mathematics. Learners use an idiosyncratic lens towards expressing and making sense of mathematical functions.

Big Ideas in Mathematics



Further information

Please see <https://youtu.be/1K8LinjG07g> or email us at khushbu.kshirsagar@tufts.edu if you have a questions or comments.

-(Ma and Kessel, 2003)