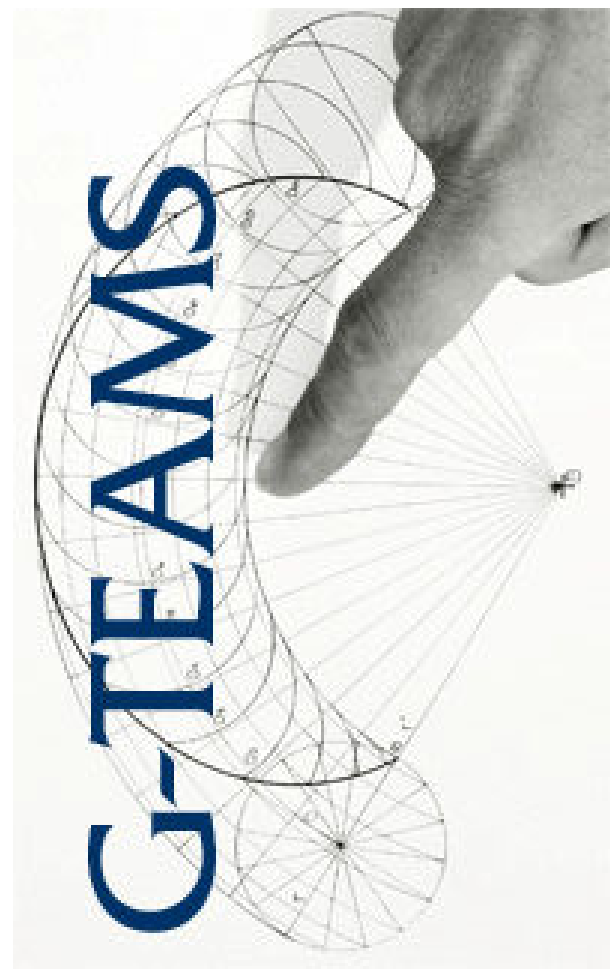




G-TEAMS at Wakefield Middle School

Brenae Bailey and Arnulfo Velásquez



7th Grade Accelerated

Challenge Problems: Problems are posted in the classroom. Students work on them for 1-2 weeks, then we discuss the solutions as a class. Both of these examples generated lively discussions and tied into the textbook units on sequences and functions.

Pascal's Triangle

Can you fill in the next row?

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1

Extend the triangle to at least 10 rows.
How many number patterns can you find?

Handshakes

In the Greeting Room, every person shakes hands with every other person exactly once. If there are two people in the room, how many handshakes happen?

If there are three people, how many handshakes happen?

Four people?

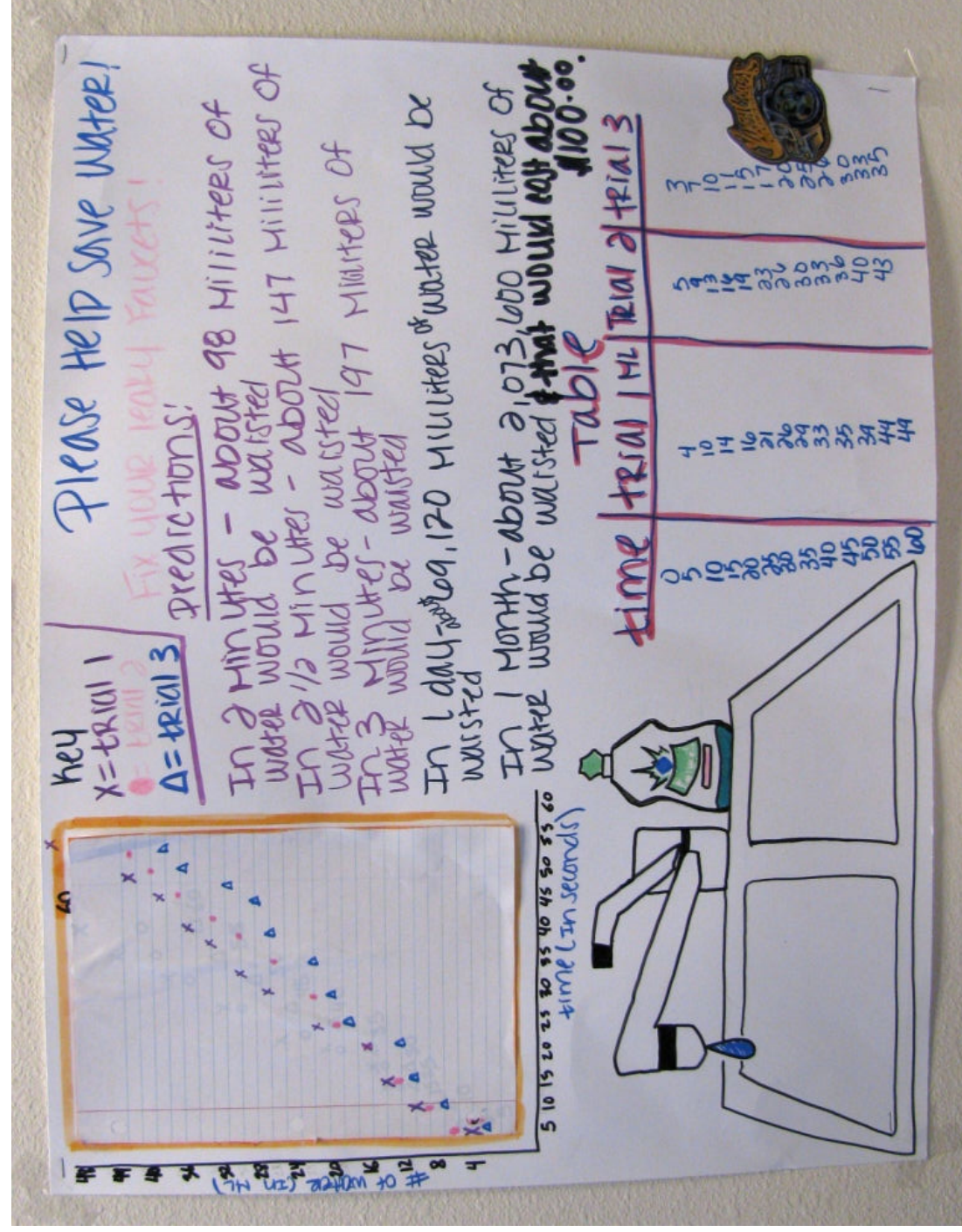
Five people?

Find a pattern in the sequence.

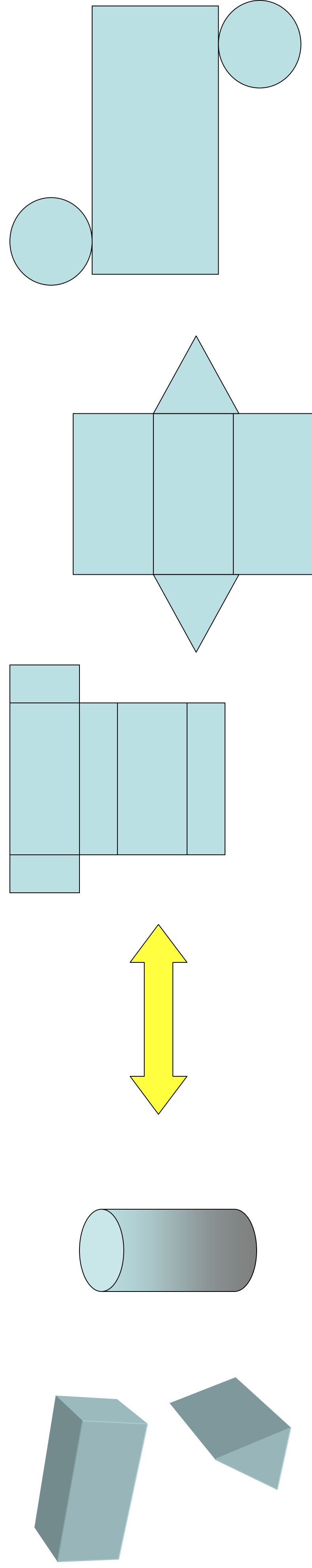
Dripping Water lab:



Students measured the volume of water leaking from a cup for one minute, taking data every five seconds. They then graphed the data and made predictions based on their analysis. We discussed relevant variables, averages of multiple trials, linear regression and rates of change.

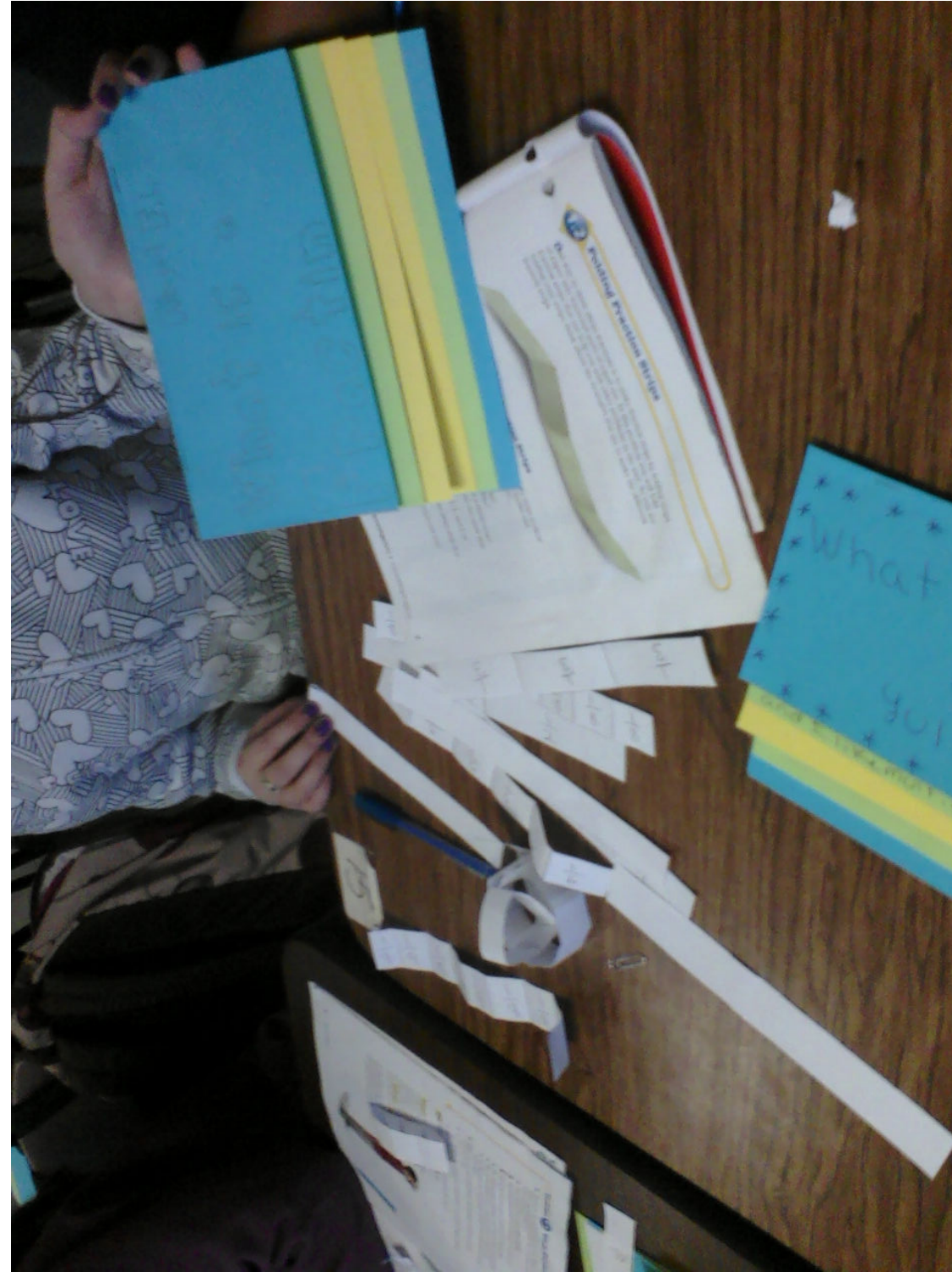
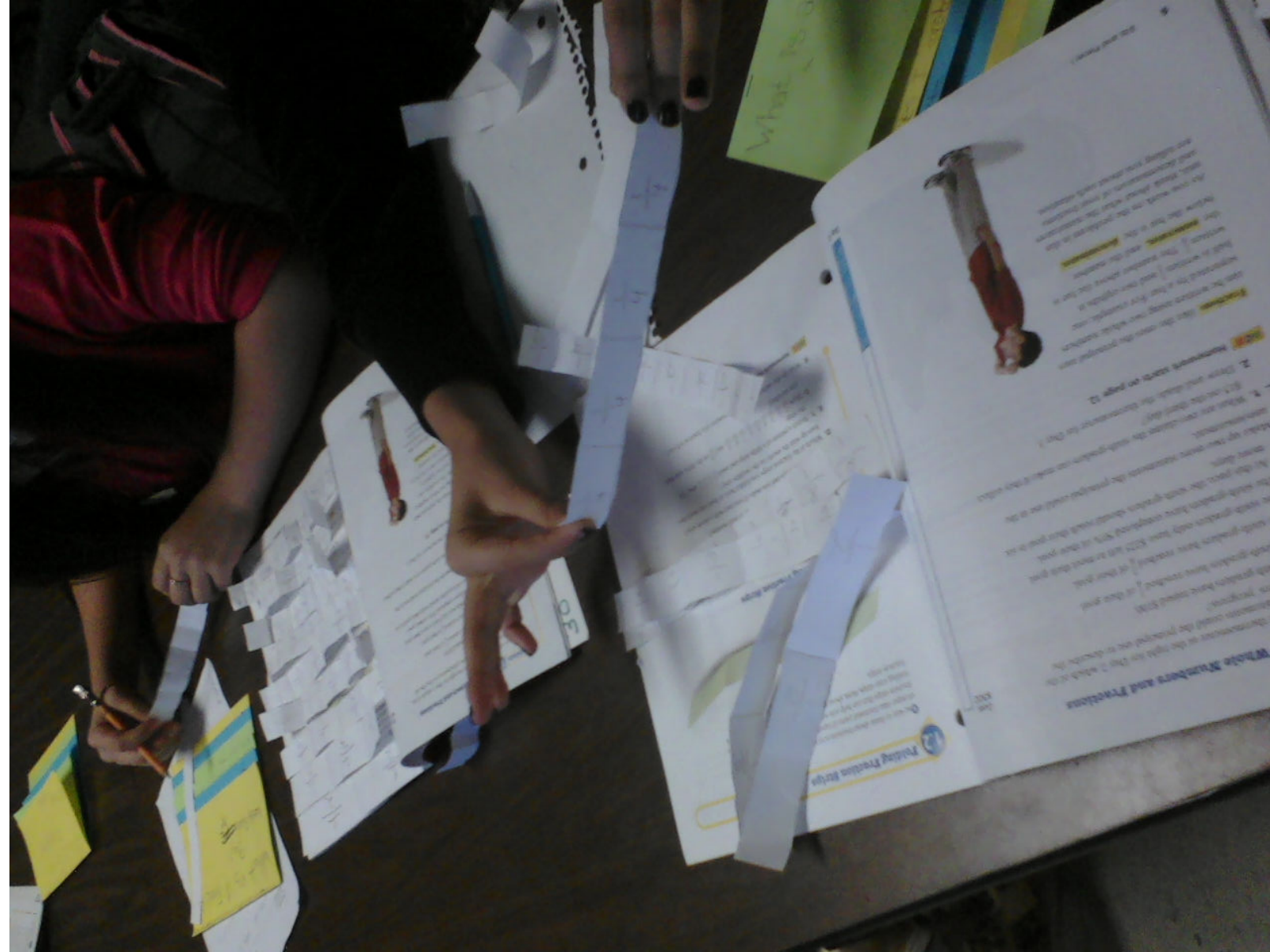


Solids: Students worked with 3D objects to describe and classify prisms, pyramids, cylinders, cones, and general polyhedra. They then connected each object with its net. These explorations led into questions on how to calculate the volume and surface area of three-dimensional figures.



6th Grade

Unit on fractions: Activities included making fraction strips and finding examples of fractions in "real life". Students recorded definitions, examples, calculations and reflections in their fraction booklets.

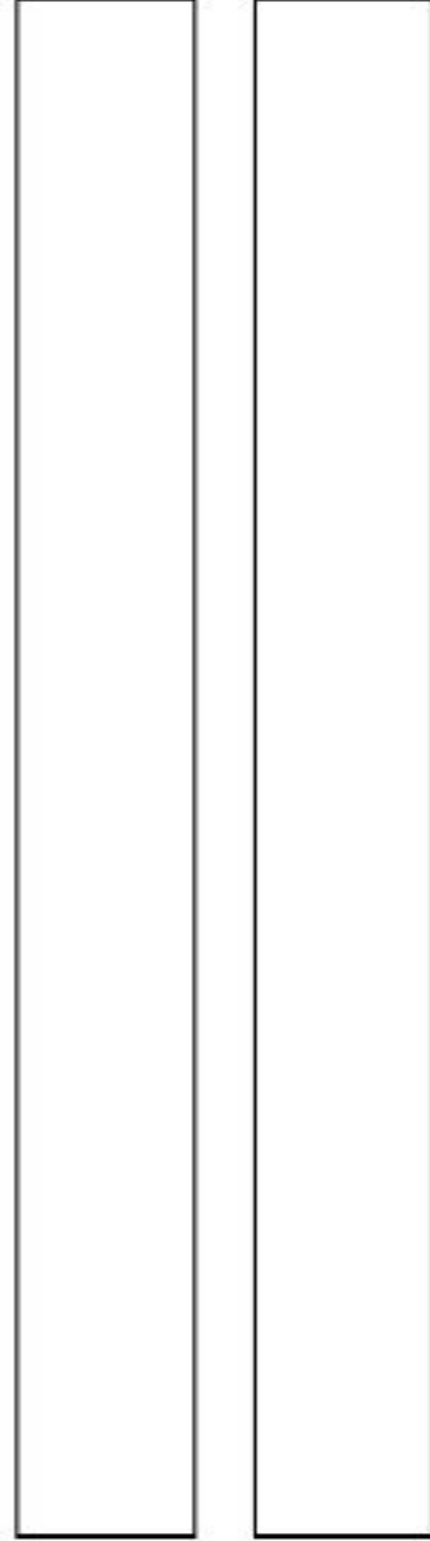


Number slides:

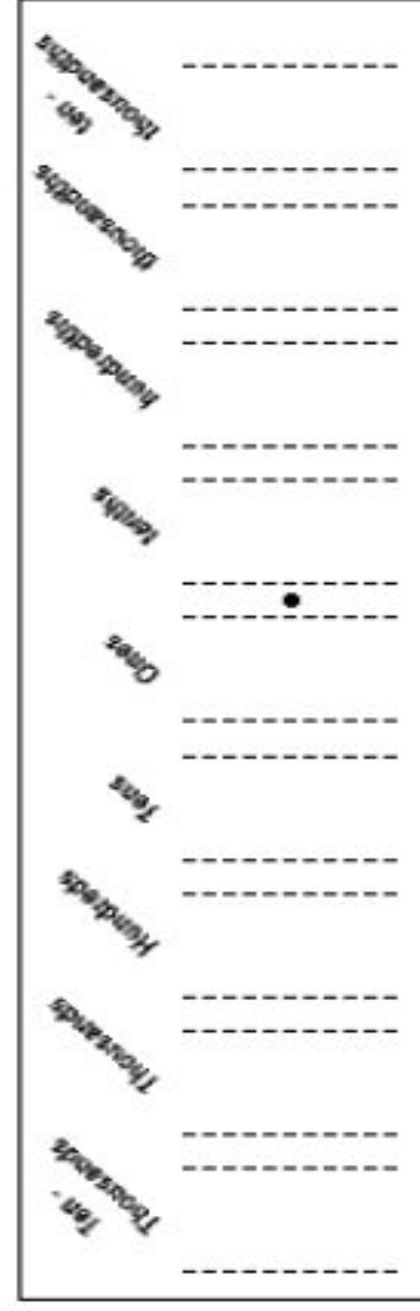
Numberslide Master

(If you would like a larger slide to work with, just photocopy this sheet and enlarge it by 20% or so.)

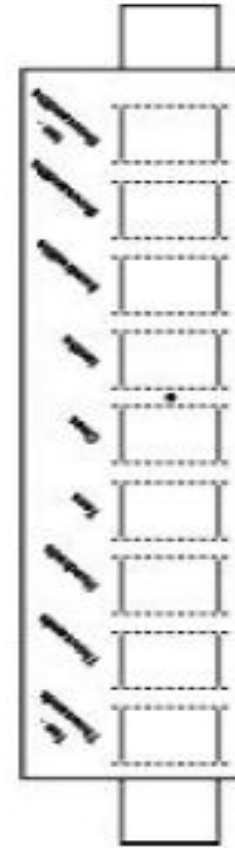
- (1) Cut out at least two of these and join them together (the longer the slide, the easier it is to work with).



- (2) Cut out one of these. Also cut a slit along each dotted line.



- (3) Thread the long strip through the slits until it looks like this...

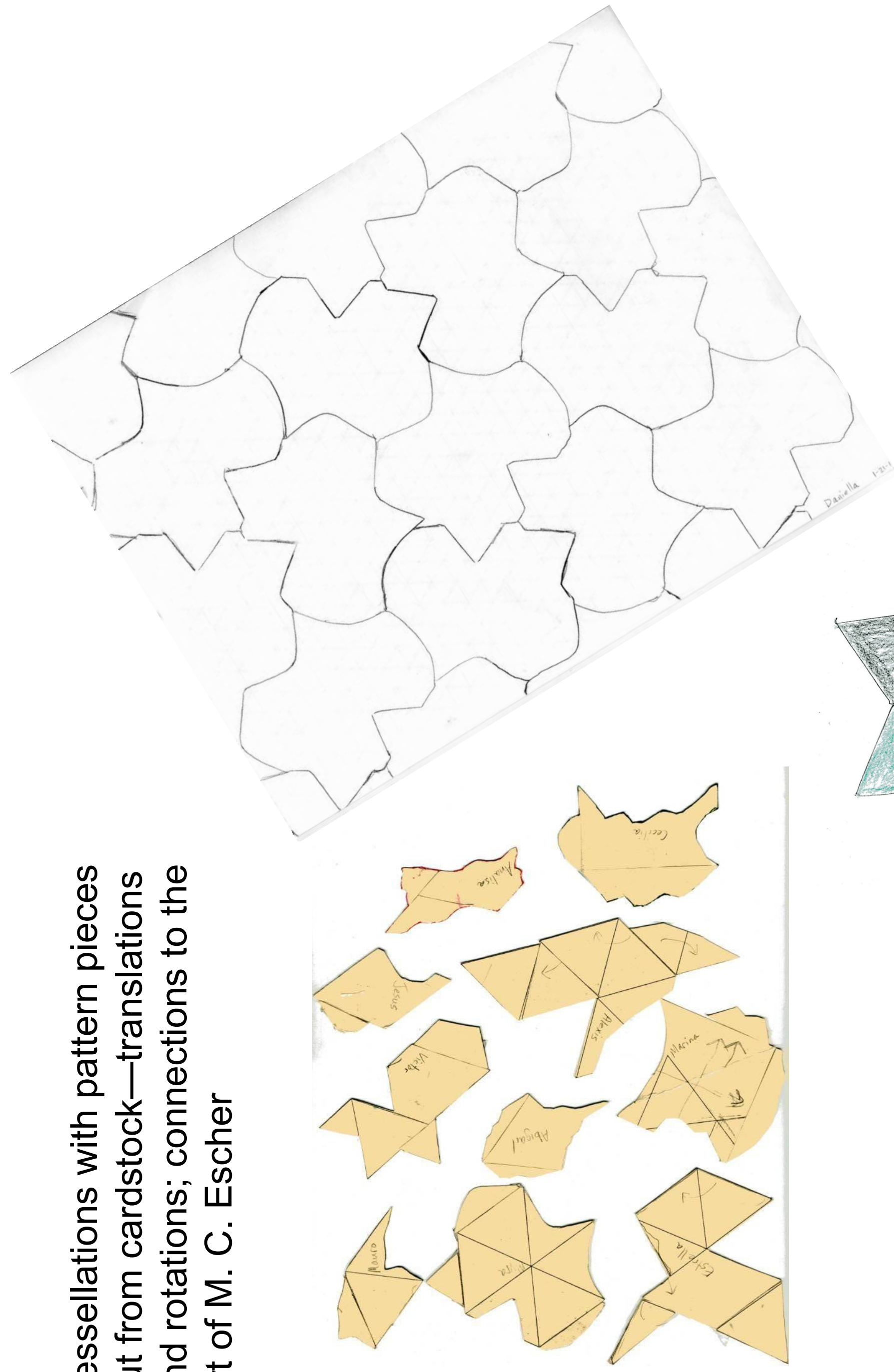


Students cut out and assembled number slides to help them explore the concept of place value. Using the number slides, we discovered the effect of multiplying and dividing decimals by powers of ten.

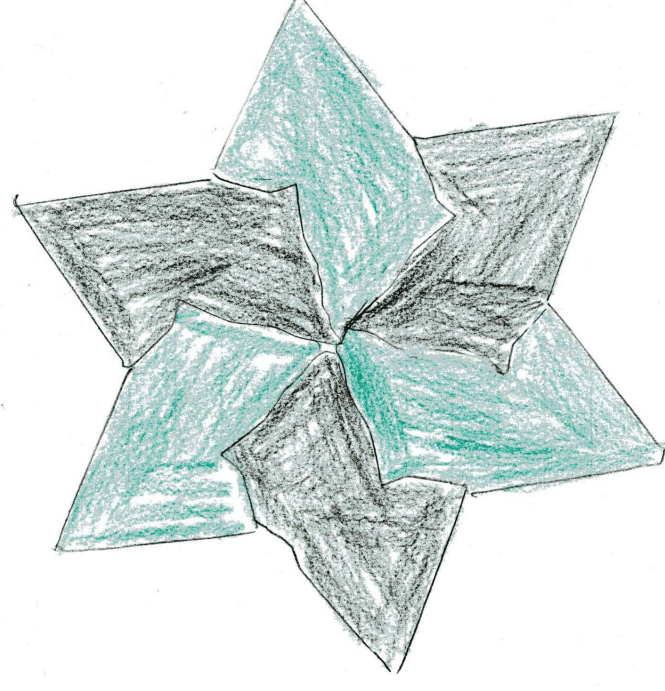
Math Intervention

Hands-on activities: Students work on creative, math-related activities in small groups. Some examples are illustrated below.

Tessellations with pattern pieces cut from cardstock—translations and rotations; connections to the art of M. C. Escher



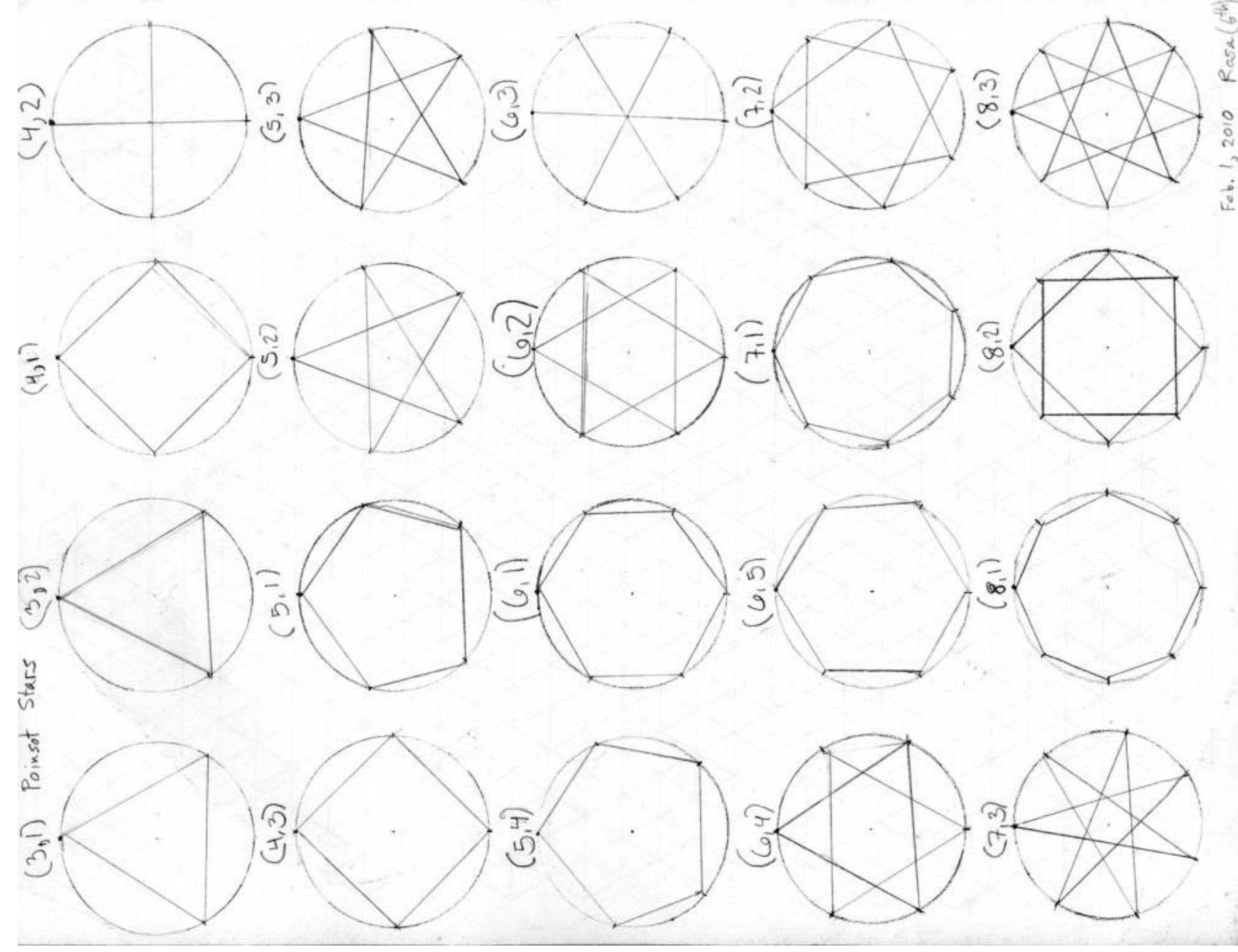
drawing Poinset stars—following algorithms, recognizing patterns and predicting shapes, classifying objects



making patterns with sets of tiles—exploring symmetry, comparing areas in terms of simple fractions



Other activities have included 3D modular origami, Möbius strips, and cutting out snowflakes.



Most students are interested and engaged in the activities for at least half the class period. We hope that these activities will provide some "mental Velcro" to help the students learn the related math concepts when they see them again in future lessons.