FRACTION MULTIPLICATION

USING LEGO® BRICKS

BRICK MATH
TEACHING MATH USING LEGO® BRICKS

Math is fun!
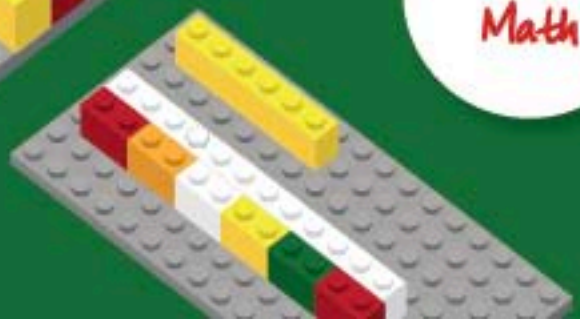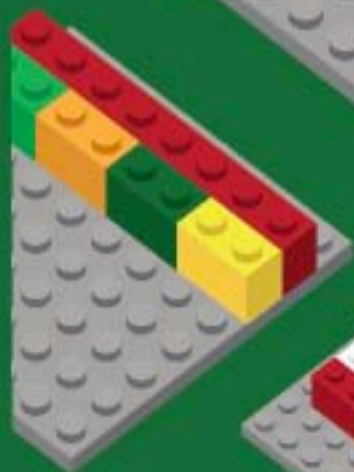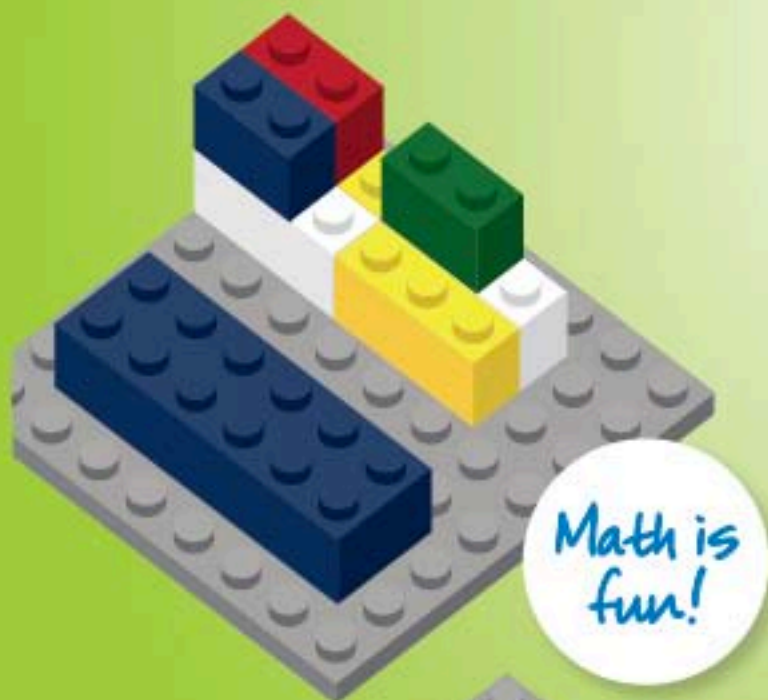
Hands-on Math

Dr. Shirley Disseler
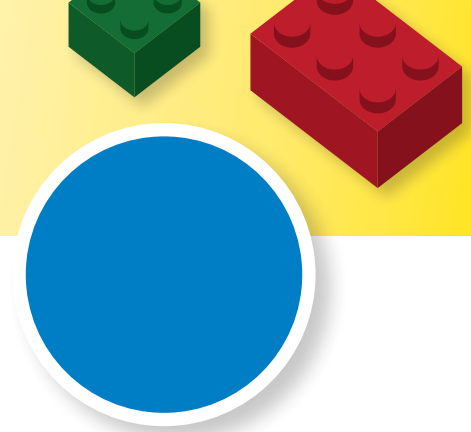
CONTENTS

MULTIPLYING FRACTIONS USING ITERATION

Part 1

What is a fraction?

_____

_____

_____

Problem #1: $\frac{1}{2}$ X $\frac{6}{8}$

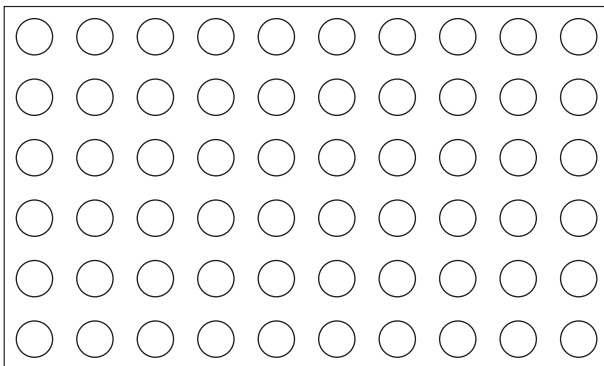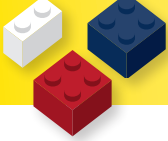**1.** Build a rectangular model of eighths using one 1x8 brick. Draw your model.

2. Stack a 1x6 brick on top of the 1x8 brick to show $\frac{6}{8}$.

Draw the 6x8 brick next to the 1x8 brick.

3. Model $\frac{1}{2}$ x $\frac{6}{8}$ using iteration (the repeating process). To do this, use the 8 from the denominator of $\frac{6}{8}$ and the 2 from the denominator of $\frac{1}{2}$. Iterate 8 by twos using eight 1x2 bricks by placing eight 1x2 bricks on the baseplate. How many studs are there in eight 1x2 bricks? _____
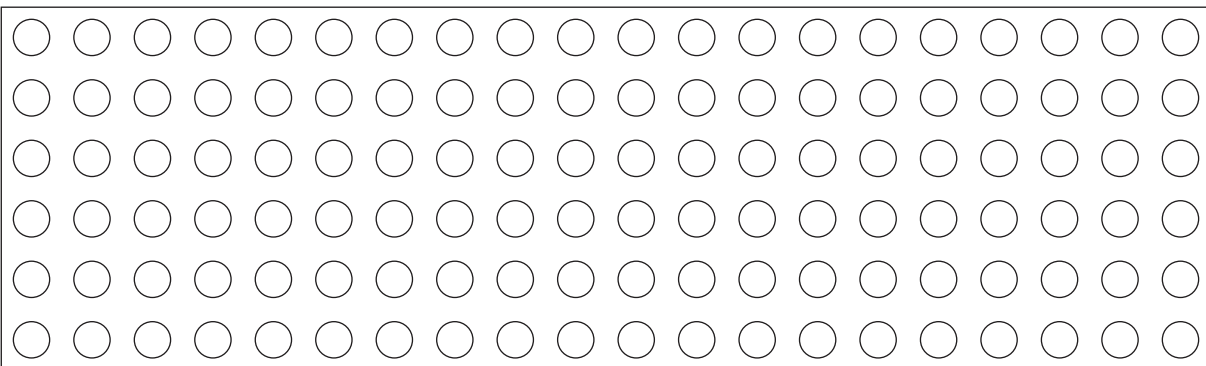
Draw your model.
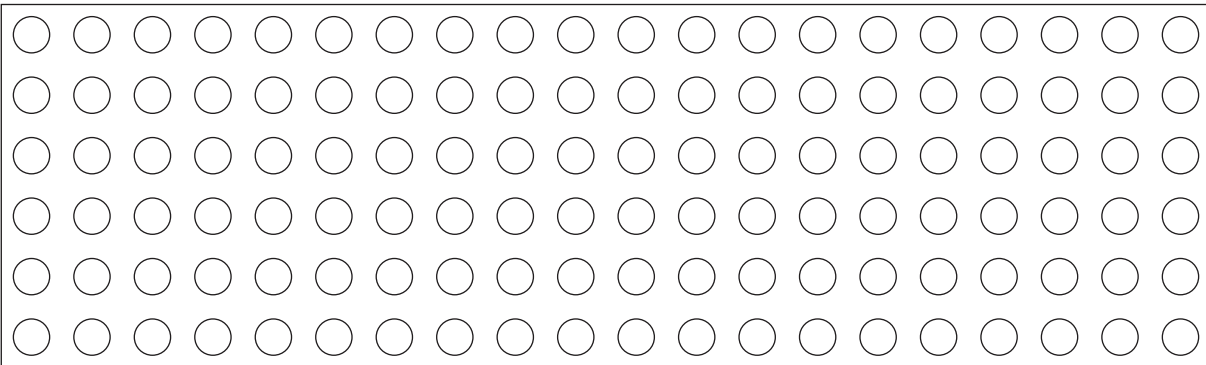
4. Because the numerator of $\frac{1}{2}$ is 1, cover one stud on each of the 6 bricks that model the numerator of $\frac{6}{8}$. How many studs are covering studs on the eight 1x2 bricks? _____

5. Model the product of $\frac{1}{2}$ x $\frac{6}{8}$ using one 1x6 brick above one 1x16 brick. Write the number sentence for the problem. _____

Draw your model and explain your thinking.

_____

_____

6. To simplify your solution, locate bricks all of the same size that will cover the model of the product evenly for both the numerator and denominator. Which brick is it? _____

Count the number of **bricks** on the top that model the numerator _____ and the number of **bricks** on the bottom that model the denominator _____.

This shows the solution simplified to _____.

Draw your model and explain your thinking.

_____

_____
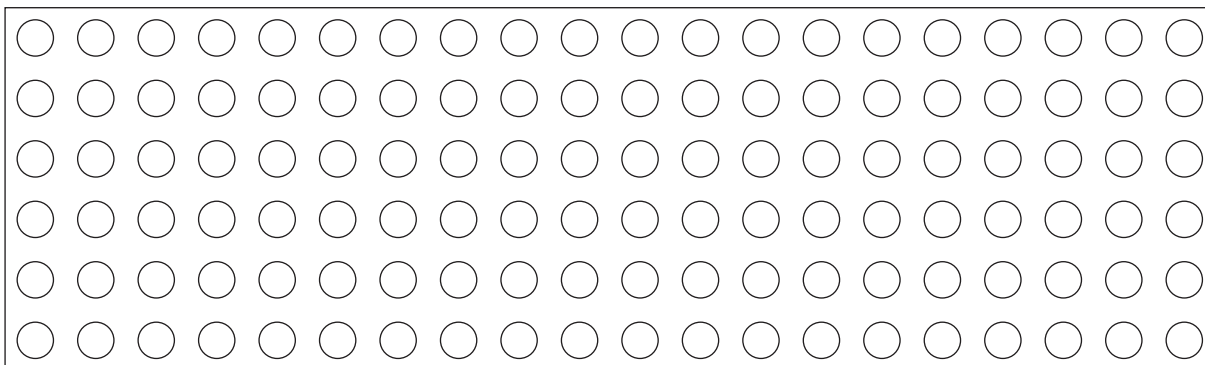
Problem #2: $^2/_3$ x $^3/_4$

1. Choose a brick that creates a rectangle that can be evenly divided into thirds. Cover that brick with smaller bricks that divide it evenly into thirds. Draw your model.