

HANDS ON FRACTIONS

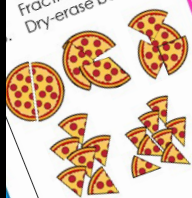
MARVEL Math

Hands-On Fraction Pizza Activities

Equivalent Fractions

Materials Needed:

Pizza Trays pages: laminated or placed in dry-erase pockets
Fraction Pizza Pieces: Laminated and cut apart
Dry-erase board and dry-erase marker



Activity 1:

Put out a $\frac{1}{2}$ pizza fraction piece on the pizza tray that is divided into halves. Have students trace that pizza and then move the $\frac{1}{2}$ pizza fraction piece to the side.

Ask: Could we make an equal amount of pizza using the $\frac{1}{2}$ pizza fraction pieces? **Yes, we can use two $\frac{1}{4}$ pieces to fill this same amount of the tray.**

Write the equation $\frac{1}{2} = \frac{2}{4}$ on the dry-erase board. Explain that fractions that make an equal amount of one whole are called equivalent fractions.

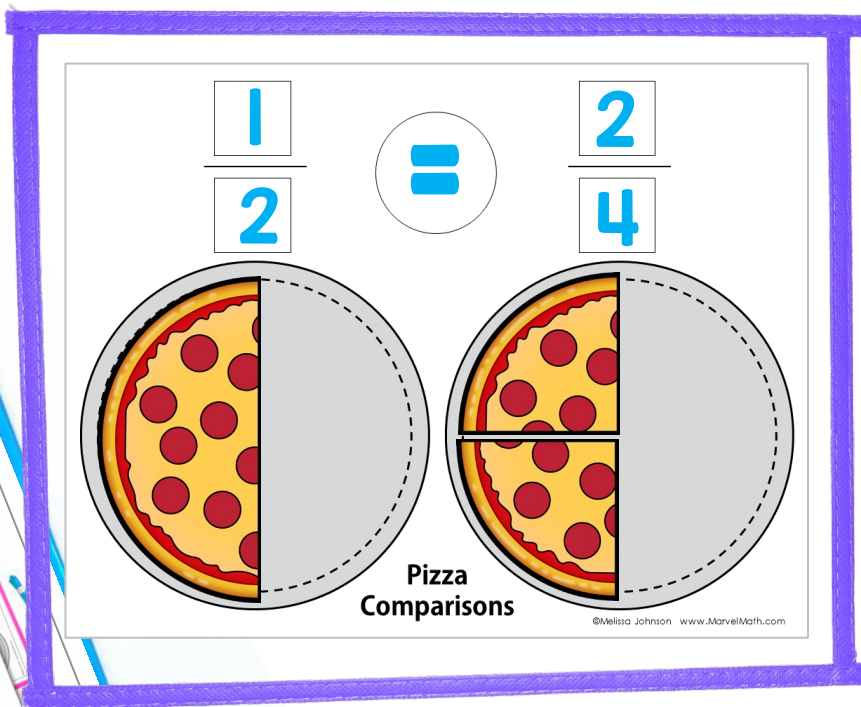
Ask: Could we make an equal amount of pizza using the $\frac{1}{3}$ pizza fraction pieces? **No, one $\frac{1}{3}$ piece is too small and two $\frac{1}{3}$ pieces are too large.**

Ask: Could we make an equal amount of pizza using the $\frac{1}{6}$ pizza fraction pieces? **Yes, we can use six $\frac{1}{6}$ pieces to fill this same amount of the tray.**

Write the equation $\frac{1}{2} = \frac{3}{6}$ on the dry-erase board.

$$\frac{1}{2} = \frac{2}{4}$$

$$\frac{1}{2} = \frac{3}{6}$$

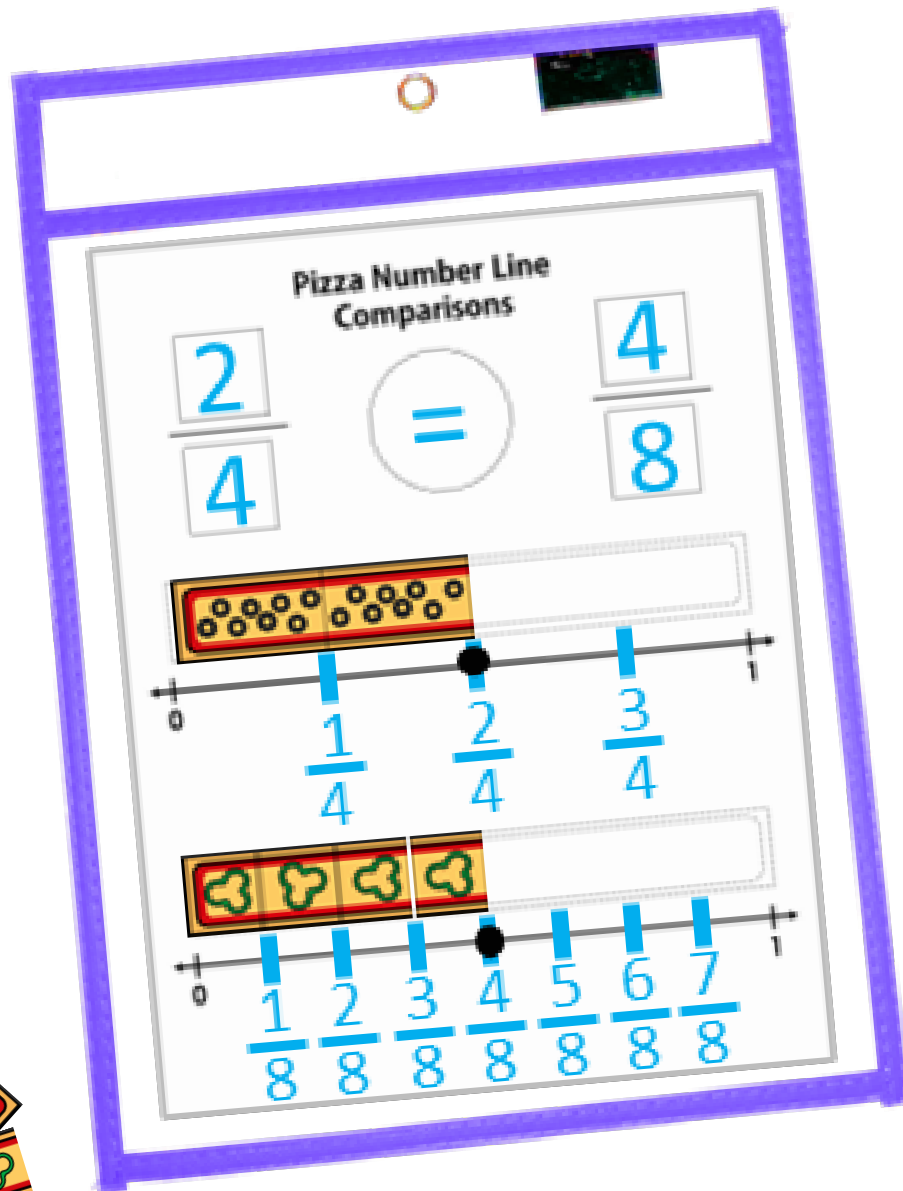
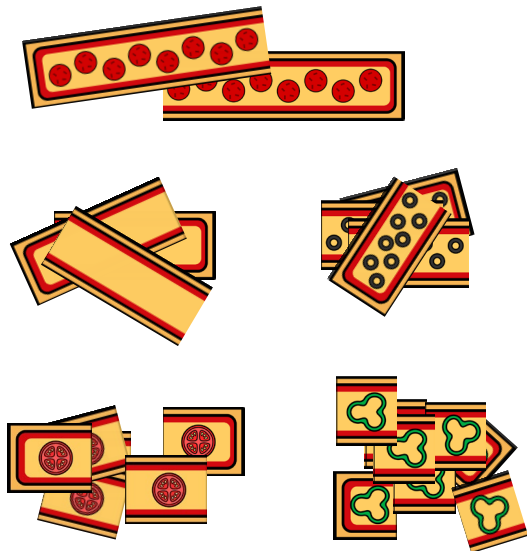


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Easy-to-Use Activities

Make fraction concepts simple for students to learn with hands-on engagement.



How Can I Use This Resource?

- Small Group Lesson
- Reteach/Intervention Time
- Tutoring or Summer School

1

These fractions have the same numerator.

2

That means they have the same number of pieces.

3

I need to look at the denominator to see which fraction has larger pieces.

*

The larger the denominator, the smaller the piece.

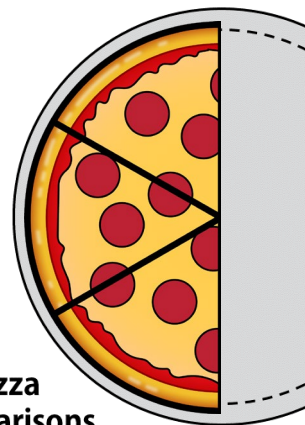
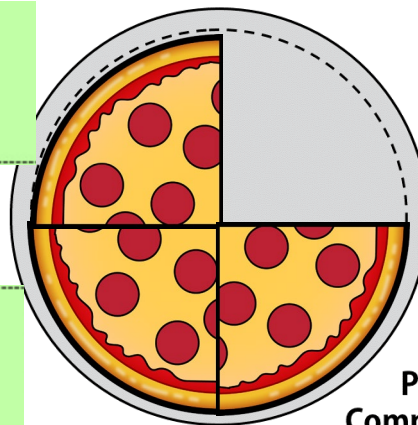
3

4

>

3

6



Pizza Comparisons

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Everything You Need

Teacher's Guides for each of the 17 activities with questions to ask during the lesson

Work Mats to anchor each lesson

Hands-On Fraction Pizza Activities Unit Fractions

Materials Needed:

1. Pizza trays/pages: laminated or placed in dry-erase pockets
2. Fraction Pizza Pieces: Laminated and cut apart (you will only use one of each type of piece for this activity)
3. Dry-erase marker



Activity 1:

Put out a fraction pizza piece that is equal to $\frac{1}{2}$. Place it on the pizza tray that is divided into halves.

Ask: How many of this size piece it would take to equal one whole pizza? 2

Write 2 in the denominator box next to the pizza tray.

Ask: How many pieces of pizza are left? 1

Write 1 in the numerator box next to the pizza tray.

Explain that this amount of pizza is equal to $\frac{1}{2}$. Repeat this process for $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{5}$. You may wish to present these unit fractions in a random order.

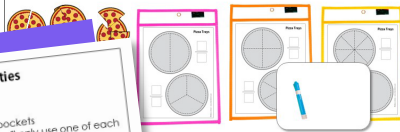
Activity 2:

Give students a fraction pizza piece and ask them to place it on the pizza tray that is divided into equal size pieces. The students name the fraction, write it to the pizza tray, and explain their work.

Hands-On Fraction Pizza Activities Naming Fractions

Materials Needed:

1. Pizza Trays/pages: laminated or placed in dry-erase pockets
2. Fraction Pizza Pieces: Laminated and cut apart
3. Dry-erase board and dry-erase marker



Pieces on the pizza tray that is divided into fourths.

How many pieces it would take to equal one whole pizza? 4

Write 4 in the denominator box next to the pizza tray.

Ask: How many pieces of pizza are left? 3

Write 3 in the numerator box next to the pizza tray.

Explain that this amount of pizza is equal to $\frac{3}{4}$.

Repeat this process for $\frac{2}{4}$ and $\frac{1}{4}$ and any other fractions you would like to use.



Hands-On Fraction Pizza Activities Fraction Number Lines

Materials Needed:

1. Pizza Number Lines page: laminated or placed in a dry-erase pocket
2. 1 Set of Fraction Bar Pizza Pieces: Laminated and cut apart
3. Dry-erase marker

Activity 13:

Have students place both $\frac{1}{2}$ fraction bar pizza pieces on top of the number line.

Ask: What is the value of each piece? $\frac{1}{2}$

Ask: How do you know? 2 pieces make one whole, so the denominator is 2. Each is 1 piece, so the numerators is 1.

The denominator is 2. Each is 1 piece, so the numerators is 1.

Draw a tick mark at the end of the first piece and label it $\frac{1}{2}$.

Explain that the distance from zero is $\frac{1}{2}$ of the pizza.

Ask: What is the total distance from zero at the end of 2 pieces? $\frac{2}{2}$ What is this equal to? 1

Repeat this process with the thirds, fourths, sixths and eighths to show students how number lines connect to fraction bars.

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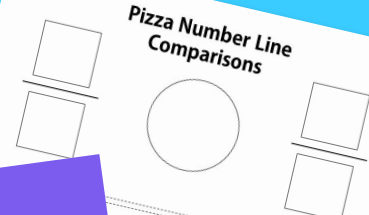
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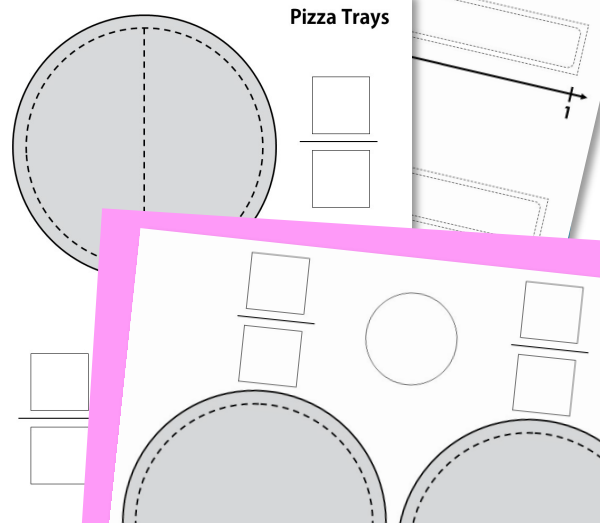
Pizza Number Lines



Pizza Number Line Comparisons



Pizza Trays



Topics Covered

- ✓ Unit Fractions
- ✓ Naming Fractions
- ✓ Fractions of Sets
- ✓ Compose & Decompose Fractions
- ✓ Equivalent Fractions
- ✓ Comparing Fractions with the same numerator or same denominator
- ✓ Fraction Number Lines



Hands-On Fraction Pizza Activities
Fractions of Sets

Materials Needed:
1. Pizza Box Cards: Laminated and cut apart
2. Dry-erase board and dry-erase marker

Activity 5:
Put 2 empty pizza box cards and 4 cheese pizza box cards out. Pose the question to students: What fraction of the pizza boxes are empty?
Ask: How many total pizza boxes are there? 6
Write 6 in the denominator's place on a white board, explaining that the denominator tells how many total items are in the set.
Ask: How many of the pizza boxes are empty? 2
Write 2 in the numerator's place on the white board, because the numerator tells how many pieces are being considered.
Explain that $\frac{2}{6}$ of the pizza boxes are empty.

Repeat this process with scenarios like these:

- Put out 2 cheese and 2 pepperoni pizzas. Ask: What fraction of the pepperonis? $\frac{2}{4}$
- Put out 3 cheese pizzas and 5 pepperoni pizzas. Ask: What fraction of the pizzas are cheese pizzas (without any other toppings)? $\frac{3}{8}$
- Put out 5 empty boxes and 1 cheese pizza. Ask: How many boxes have pizza in them? $\frac{1}{6}$

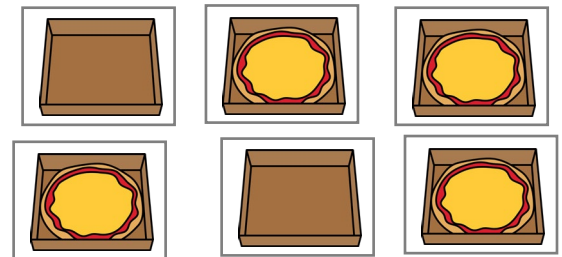
Activity 6:
Place the stacks of pizza box cards in front of students.
Ask them to create a set where $\frac{2}{3}$ of the pizzas have pepperonis.

Ask: How many pepperoni pizza cards do you need to use? 2, because the numerator is 2.
Ask: How many total cards will you use? 3, because the denominator is 3.
Ask: What can you add so that you have a total of 3 cards? 1 cheese pizza card.

with similar prompts.

What fraction of the pizza boxes are empty?
 $\frac{2}{6}$

$\frac{2}{3}$ of the pizzas have pepperonis



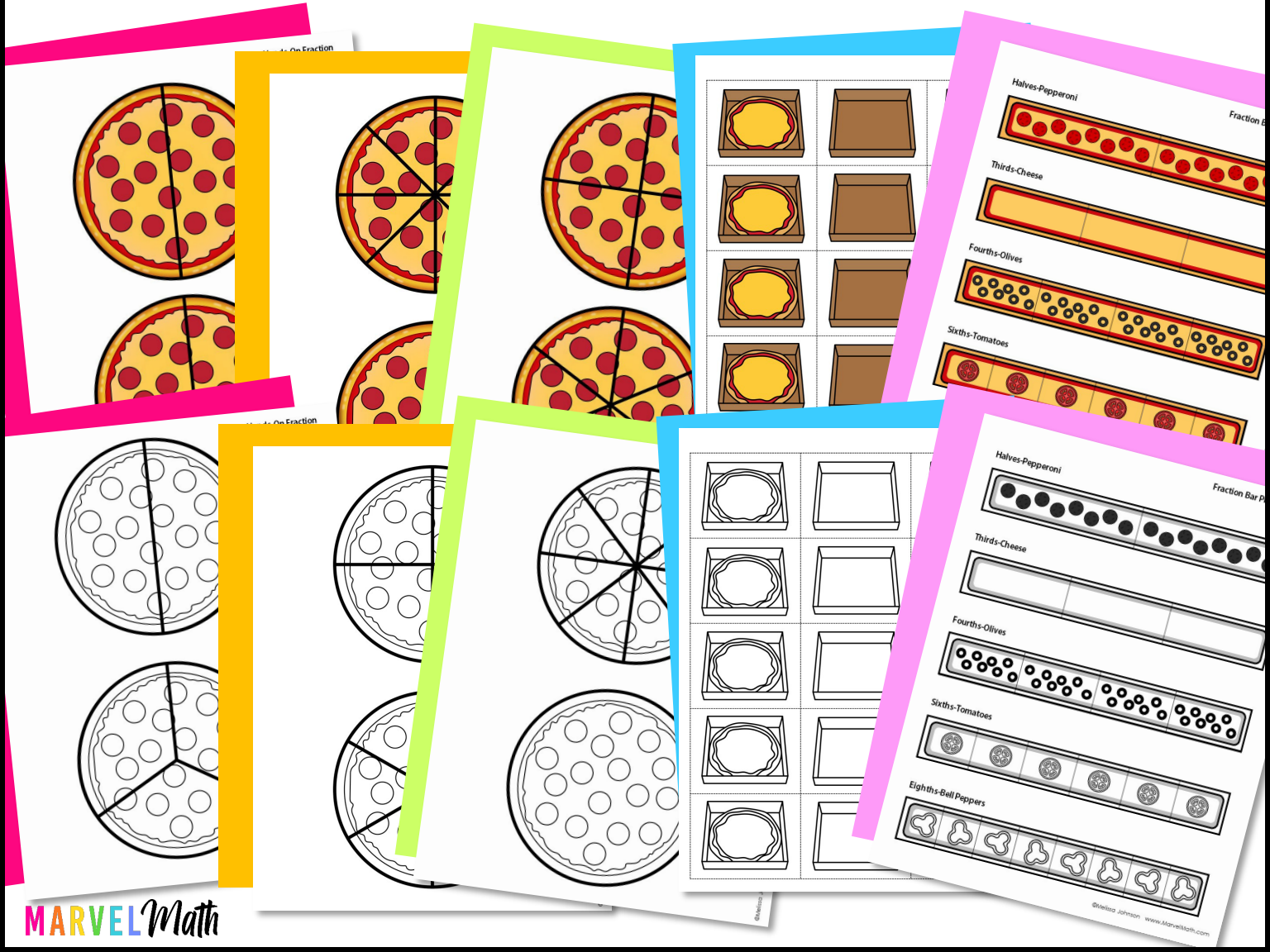
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$$\frac{2}{6}$$



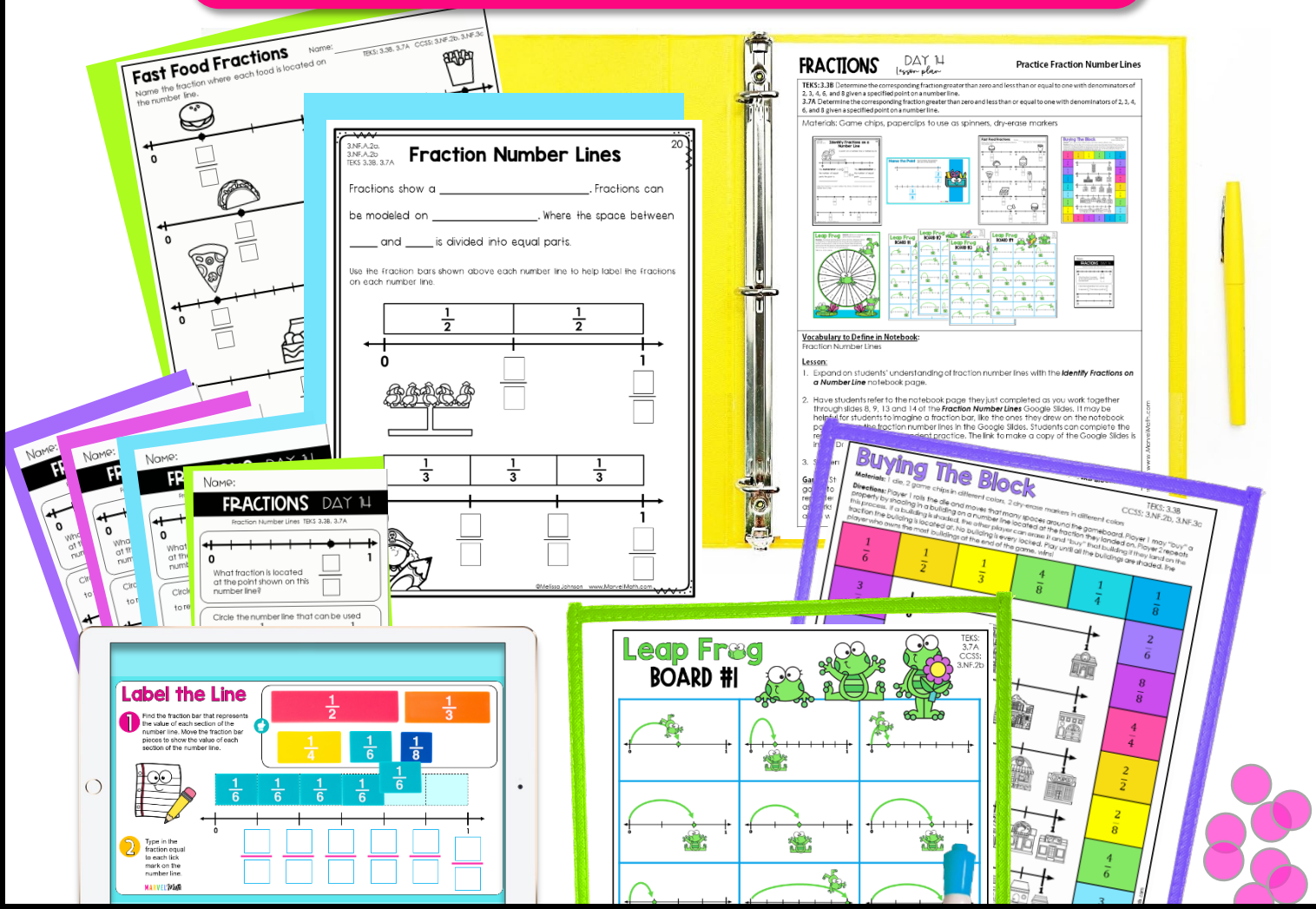
Also Includes

Printable Pizza Fraction Manipulatives in Color & BW



This resource is included in this Time & Money Saving Bundle

3rd Grade Fraction Unit Bundle



About the Author

This resource was created by Melissa Johnson, who has 16 years of k-10 teaching experience and a masters degree in Mathematics Education. Her resources build conceptual understanding, make connections between math topics and engage students in the mathematics they are learning.

