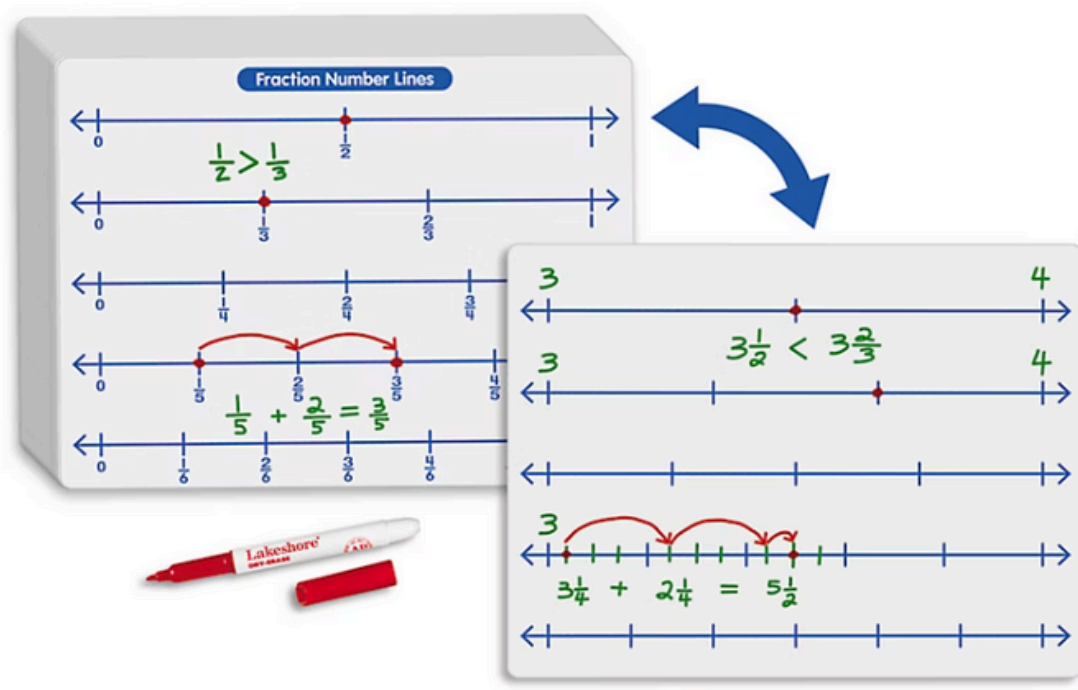


# Dry-Erase Fraction Number Lines



Mid-Valley  
STEM-CTE HUB

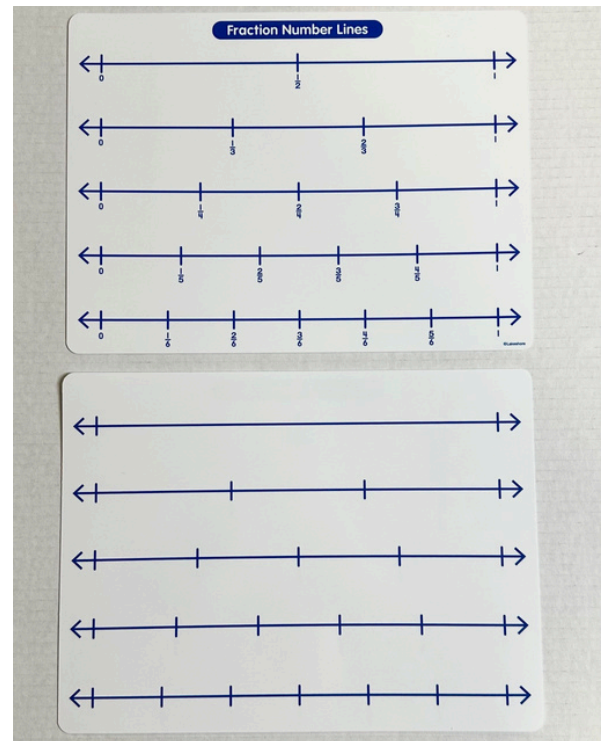


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# Dry-Erase Fraction Number Lines

The Dry Erase Board Fraction Number Lines STEAM Kit is designed to help students visualize and understand fractions using interactive, hands-on tools. This kit includes individual dry-erase boards with fraction number lines printed on them, graph paper, and dry-erase markers, enabling students to practice fraction placement, comparison, and operations. Ideal for grades 3–6, this kit fosters a deeper understanding of fractions and their relationships through dynamic, visual learning experiences.



**Grade Level**

**3<sup>rd</sup> - 6<sup>th</sup>**

**Group Size**

**1 - 2**

**Time Duration**

**10 - 30 minutes**

## Content of Kits

### Components

- 60 Dry-erase board fraction number lines

### Components

- Dry-erase markers
- Graph paper



# Usage

## Getting Started

### 1. Unbox and Inspect Components:

Start by carefully unboxing the kit and ensuring all components are present and undamaged. This includes the dry-erase boards, graph paper, dry-erase markers, and erasers.

**2. Prepare the Dry-Erase Boards:** Hand out the fraction number line dry-erase boards to each student or group. These boards feature fraction number lines printed on them, allowing students to place fractions on the number line to better visualize their relative values.

**3. Distribute Graph Paper:** Give each student or group a piece of graph paper for additional activities that involve plotting fractions or creating their own number lines. The graph paper can also be used to extend learning to create fractional models or solving fraction problems.

### 4. Set Up Dry-Erase Markers and Erasers:

Ensure that students have access to the dry-erase markers and erasers. The markers will be used to write and manipulate fractions on the dry-erase boards, while the erasers will allow them to make changes during activities.

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## Storage

- **Dry-Erase Boards** - Store the dry-erase boards flat in the provided container to keep them organized and prevent any damage to the surface.
- **Graph Paper** - Store the graph paper flat to avoid creases or folds. Keep it in a folder or binder for easy access.
- **Markers and Erasers** - Store the dry-erase markers and erasers in a small container or pouch to keep them together and easy to find.

## Troubleshooting

- **Need more graph paper?** Consider making copies of the provided graph paper to help the consumable resources stretch as far as possible.



# Activity Guide

## Beginner

### Placing Fractions on the Number Line

Students will use the fraction number line dry erase boards to place different fractions on the number line. Start by giving students simple fractions like  $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{3}{4}$ , and ask them to place these fractions on their number lines. Students will then discuss the relative sizes of the fractions and how they are positioned on the line, helping them understand fraction relationships visually.

## Intermediate

### Fraction Comparison

Students will use their fraction number line boards to compare two or more fractions. For example, they can compare  $\frac{1}{3}$  and  $\frac{1}{2}$  by placing both fractions on the number line and visually determining which is larger. After positioning the fractions on the board, students will record their observations and explain how they determined the comparison. This activity reinforces fraction ordering and visualization.

## Advanced

### Adding Fractions

Students will use the fraction number line boards to add fractions with like denominators. For example, students can add  $\frac{1}{4} + \frac{2}{4}$  by placing both fractions on the number line and visually combining them. Students will trace the movement from the first fraction to the second and count the total. This activity helps them understand how fractions can be added by combining portions along the number line.

## Extension Activities:

### Subtracting Fractions

Students will practice subtracting fractions using the fraction number line boards. For example, if the problem is  $\frac{3}{4} - \frac{1}{4}$ , students will place  $\frac{3}{4}$  on the number line and move back  $\frac{1}{4}$  to reach the solution. This activity reinforces the concept of subtraction and helps students understand how to break down fractions into smaller parts.



# Learning Extensions

## STEAM Connections: Math

### Learning Objectives:

- Visualize and understand fractions through number lines.
- Build skills in comparing, adding, and subtracting fractions.
- Reinforce understanding of fraction equivalency and ordering.
- Develop critical thinking skills in solving fraction problems.
- Encourage collaboration and discussion as students share their findings.

### Career Connections:

- **Mathematician** - Uses fractions and number relationships to solve real-world problems.
- **Engineer** - Applies mathematical concepts like fractions in design, construction, and measurements.
- **Data Analyst** - Works with data that involves fractions, ratios, and percentages to interpret and make decisions.
- **Teacher** - Teaches foundational math concepts using visual aids and interactive tools to help students grasp challenging topics.

### Essential Employability Skills:

- Critical Thinking
- Collaboration
- Communication
- Attention to Detail





# Resources and Accessibility

## Safety Guidelines

- Use the dry-erase markers carefully to prevent staining clothes or surfaces.
- Supervise marker usage to prevent choking hazards.

## Library Catalog



## Library Resources



## Accessibility

- Use large, tactile number lines for students with visual impairments to help them locate fractions.
- Allow additional time for students with fine motor challenges to place fractions on the number line.
- Provide extra practice and simplified fraction problems, and offer verbal or visual cues for students who need additional assistance.

## Feedback

QR to feedback survey

