



# Fractions on Number Lines

Let's investigate equivalent fractions on a number line.

## Warm-up

### Number Talk: A Number Times 12

Find the value of each expression mentally.

- $2 \times 12$

- $4 \times 12$

- $8 \times 12$

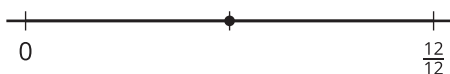
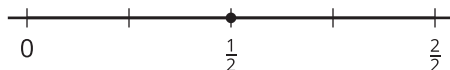
- $16 \times 12$



## Activity 1

### All Lined Up

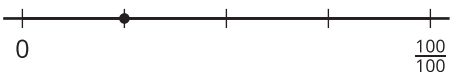
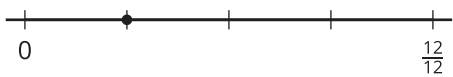
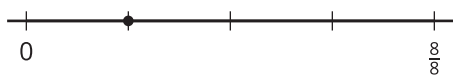
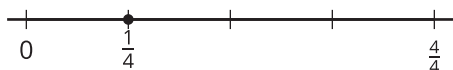
1. These number lines have different labels for the tick mark on the far right.



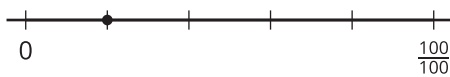
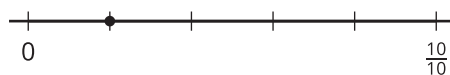
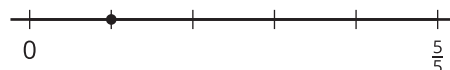
- Explain to your partner why the tick marks on the far right can be labeled with different fractions.
- Label each point with a fraction it represents (other than  $\frac{1}{2}$ ).
- Explain to your partner why the fractions you wrote are equivalent.

2. Label the point on each number line with a fraction it represents. Use a different fraction for each number line. Be prepared to explain your reasoning.

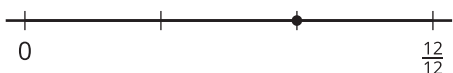
a.



b.



c.



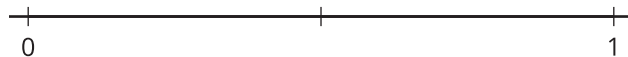
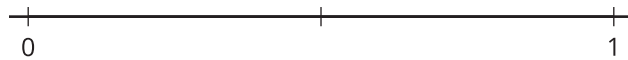
## Activity 2

### How Far to Run?

1. Han and Kiran plan to go for a run after school.

- Han says, "Let's run  $\frac{3}{4}$  mile. That's how far I run to my soccer practice."
- Kiran says, "I can only run  $\frac{9}{12}$  mile."

Which distance should they run? Explain your reasoning. Use one or more number lines to show your reasoning.



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2. Mai wants to join Han and Kiran on their run. She says, "How about we run  $\frac{7}{8}$  mile?"

Is the distance Mai suggests the same as what her friends wanted to run? Explain or show your reasoning.

