

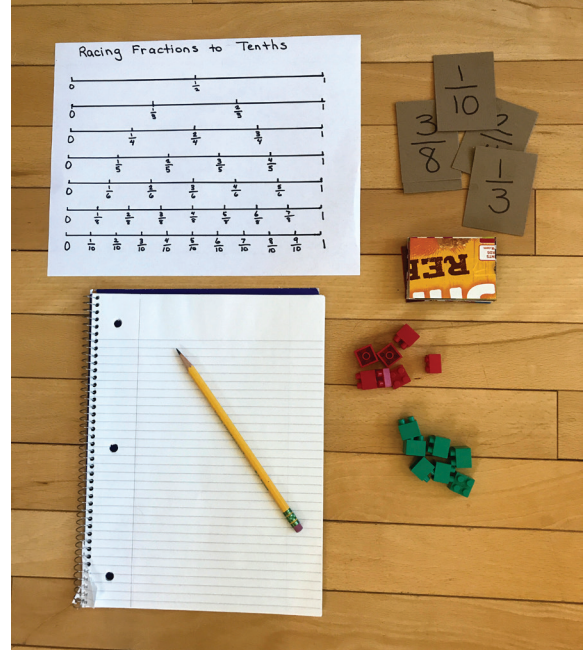
Racing Fractions to Tenths

Object of the Game

Players take turns drawing fraction cards and moving their game marker along a number line from 0 to 1. The first player to move all of their game markers to 1 on all of the number lines, wins!

Materials

- 1 Racing Fractions to Tenths Game Board
Print the game board or make your own.
Find directions for making your own game board at the end of this document.
- 1 set of Racing Fractions to Tenths Cards
Print the cards or make your own. You can use paper, a grocery bag, or a cereal or other food box to make cards.
- 1 Racing Fractions to Tenths Record Sheet
Print the record sheet or use plain paper.
- 14 game markers (7 each of 2 different colors or objects)
You can use dried beans, buttons, coins, paper scraps, small toys such as building blocks, etc.).
- Pen or pencil



Skills

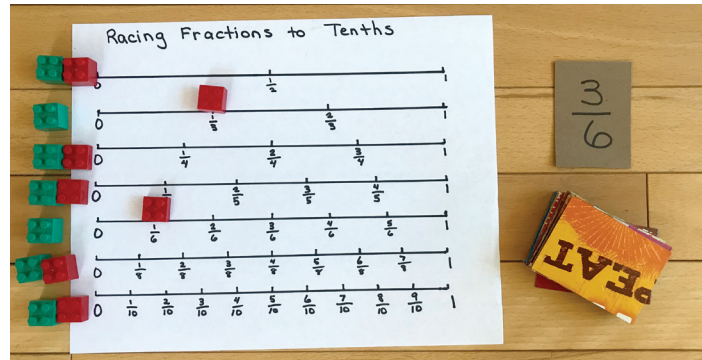
This game helps us practice

- Recognizing equivalent fractions
- Adding and subtracting fractions with like denominators
- Adding and subtracting fractions with unlike denominators

How to Play

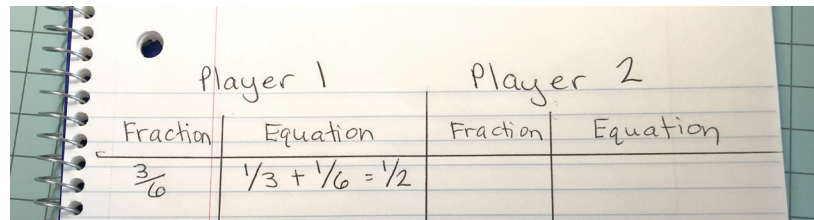
1. Get ready to play:
 - » Mix up the fraction cards and put them in a stack facedown between the players.
 - » Choose your game markers and have each player put 1 game marker at the beginning (on 0) of each number line on the shared game board. One player will travel above the number line, the other will travel below the number line.
 - » Decide who will go first.

2. Player 1 draws a card and moves one or more game markers the distance shown on the card.



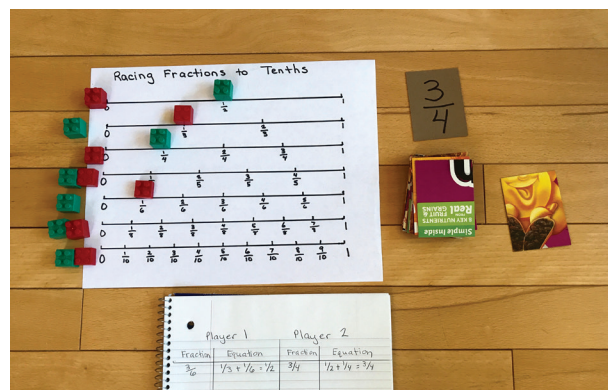
Player 1 I got $\frac{3}{6}$. That's the same as $\frac{1}{2}$, so I could move my marker to $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$, or $\frac{5}{10}$ because all of those are the same as $\frac{1}{2}$. Hmmmm...or I could move one marker to $\frac{1}{3}$ and another one to $\frac{1}{6}$. I remember those make $\frac{1}{2}$ from when we worked with fractions at school. I think I'll do that.

3. Player 1 records the fraction in the Fraction column on the record sheet and writes a fraction or an equation in the Equation column to tell how the game markers were moved.
- » If the player got a card with $\frac{3}{6}$ and moved one marker to $\frac{1}{3}$ and another marker to $\frac{1}{6}$, then the player would write $\frac{1}{3} + \frac{1}{6} = \frac{1}{2}$.



Player 1 I wrote $\frac{1}{3} + \frac{1}{6} = \frac{1}{2}$, because $\frac{3}{6}$ is the same as $\frac{1}{2}$.

4. Player 2 checks the first player's work on the record sheet. Player 1 tries again if a mistake was made. Then Player 2 draws a fraction card and takes a turn. Player 1 checks the second player's work.



Player 2 I got $\frac{3}{4}$. I know $\frac{2}{4}$ is the same as $\frac{1}{2}$, so I'll move 1 marker to $\frac{1}{2}$. That leaves $\frac{1}{4}$ because $\frac{3}{4} - \frac{2}{4}$ is $\frac{1}{4}$. So, I'll move another marker to $\frac{1}{4}$.

5. Players keep taking turns until one player's game markers are all on 1.
 - » If a player can't find a possible move for a card drawn, the player will need to wait for their next turn.
 - » Players may move game markers backward. For example, if a player gets a card that says $\frac{1}{3}$, the player can move one marker up $\frac{1}{2}$ and another marker back $\frac{1}{6}$. The sum or difference of the moves still needs to equal the value on the fraction card.
6. The first player to move all of their game markers to 1 on all of the number lines on the game board, wins!
7. Have fun!

Tips for Families

Before the game:

- Talk about the fractions on the game board.
 - » *What do you notice? How are they alike? How are they different?*
 - » *Equivalent fractions are two or more different fractions that represent the same quantity. Look at the location of the fractions along the line. Do you see some equivalent fractions? (Your child may notice $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$ and $\frac{5}{10}$ all land exactly halfway along their lines or that $\frac{1}{4}$ and $\frac{2}{8}$ are in the same location along their lines.)*

During the game:

- Ask questions:
 - » *What are some possible moves for this card?*
 - » *Which move will help you the most? Why?*
 - » *How can you check to see if the moves you made add up to the fraction on the card you got?*
 - » *When would you want to move backward? Why?*
 - » *What fraction would you most like to get on your next turn? Why? Is there an equivalent fraction you might get instead? What is it? How would it help?*
 - » *Share your thinking out loud as you decide how to take your moves. Remember, the decisions your child will make are influenced by their understanding of fractions, thus far. Sharing your thinking is a way to help your child see new possibilities.*

Change It Up

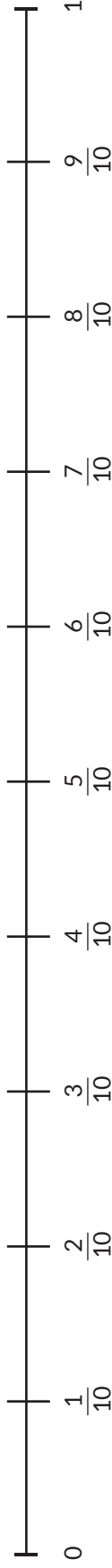
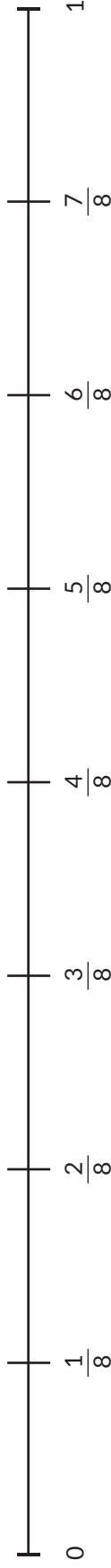
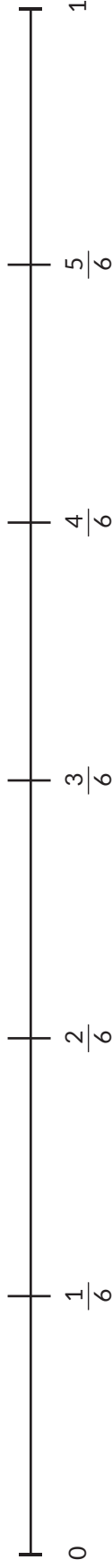
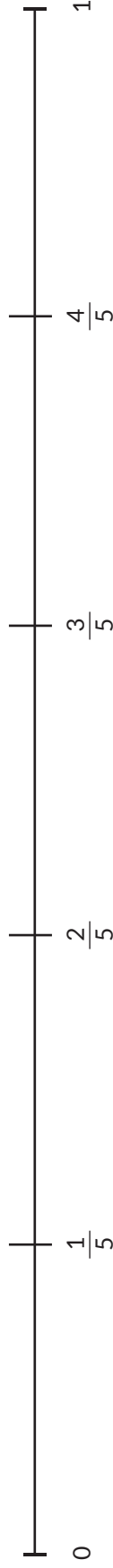
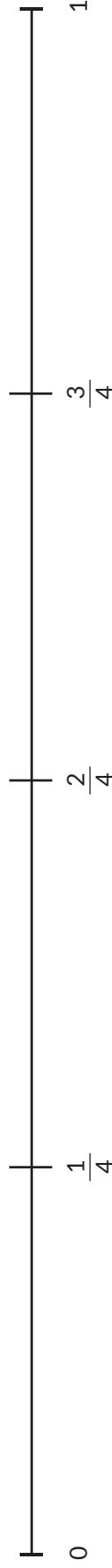
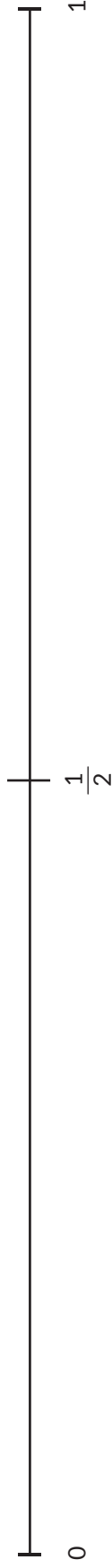
Making even small changes to a game can invite new ways of thinking about the math. Try making one of the changes below.

- Play cooperatively. Work together to get all of the game markers from 0 to 1.
- Go backwards on the number line. Both players place their markers on 1 at the start of the game and work back to 0. The winner is the first player to get all of their markers on the number lines back to 0.
- If the game seems a bit challenging, try playing Racing Fractions to Eighths (located with the Grade 3 Family Games).
- If you're ready for a challenge, try playing Racing Fractions to Twelfths (located with the Grade 5 Family Games).
- Want to learn more about fractions? Try the free Fractions app, available at www.mathlearningcenter.org/resources/apps/fractions.

Here are a few things you can do:

- » Compare fractions in both bars and circles
- » Explore equivalent fractions
- » Add and subtract fractions

Racing Fractions to Tenths Game Board





$$\frac{1}{10}$$

$$\frac{2}{10}$$

$$\frac{3}{10}$$

$$\frac{4}{10}$$

$$\frac{5}{10}$$

$$\frac{6}{10}$$

$$\frac{7}{10}$$

$$\frac{8}{10}$$

$$\frac{9}{10}$$



$\frac{1}{8}$	$\frac{2}{8}$	$\frac{3}{8}$
$\frac{4}{8}$	$\frac{5}{8}$	$\frac{6}{8}$
$\frac{7}{8}$	$\frac{1}{6}$	$\frac{2}{6}$



$$\frac{3}{6}$$

$$\frac{4}{6}$$

$$\frac{5}{6}$$

$$\frac{1}{5}$$

$$\frac{2}{5}$$

$$\frac{3}{5}$$

$$\frac{4}{5}$$

$$\frac{1}{4}$$

$$\frac{2}{4}$$



$\frac{3}{4}$	$\frac{1}{3}$	$\frac{2}{3}$
$\frac{1}{2}$		

Directions for Making Your Own Racing Fractions to Tenths Game Board

Here's how to make your own game board:

- Draw seven 9-inch lines on a piece of paper.
- Label the lines with 0 on the far left side and 1 on the far right side.
- On the first line, start at 0 and measure $4\frac{1}{2}$ inches. Make a tick mark and label it $\frac{1}{2}$.
- On the second line, start at 0 and measure 3 inches. Make a tick mark and label it $\frac{1}{3}$. Then measure another 3 inches, make a tick mark, and label it $\frac{2}{3}$.
- On the third line, start at 0 and measure $2\frac{1}{4}$ inches. Make a tick mark and label it $\frac{1}{4}$. Then measure another $2\frac{1}{4}$ inches, make a tick mark, and label it $\frac{2}{4}$. Measure another $2\frac{1}{4}$ inches, make a tick mark, and label it $\frac{3}{4}$.
- On the fourth line, start at 0 and measure $1\frac{13}{16}$ inches. Make a tick mark and label it $\frac{1}{5}$. Continue measuring $1\frac{13}{16}$ inches, making tick marks, and labeling the marks $\frac{2}{5}$, $\frac{3}{5}$ and $\frac{4}{5}$ as you move down the line.
- On the fifth line, start at 0 and measure $1\frac{1}{2}$ inches. Make a tick mark and label it $\frac{1}{6}$. Continue measuring $1\frac{1}{2}$ inches, making tick marks, and labeling the marks $\frac{2}{6}$, $\frac{3}{6}$, $\frac{4}{6}$, and $\frac{5}{6}$ as you move down the line.
- On the sixth line, start at 0 and measure 1 inch. Make a tick mark and label it $\frac{1}{8}$. Continue measuring 1 inch, making tick marks, and labeling the marks $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, and $\frac{7}{8}$ as you move down the line.
- On the seventh line, start at 0 and measure $\frac{7}{8}$ inch. Make a tick mark and label it $\frac{1}{10}$. Continue measuring $\frac{7}{8}$ inch, making tick marks, and labeling the marks $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, and $\frac{9}{10}$ as you move down the line.

