

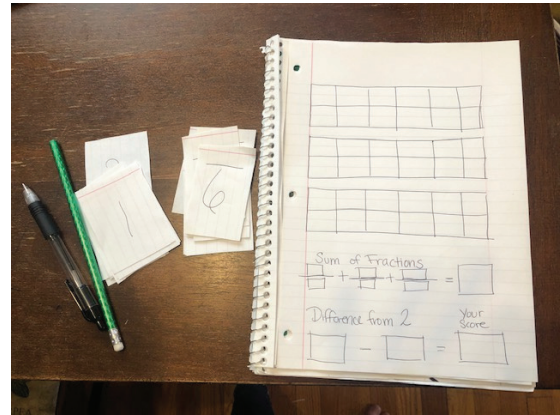
Target Two

Object of the Game

Players take turns using Number Cards to create fractions. Each player makes three fractions and adds them together. The player whose sum is closer to 2 is the winner. Be sure to check out Tips for Families before playing this game.

Materials

- 2 decks of cards (1 deck of 1, 2, and 3 as numerator cards and 1 deck of 3, 6, and 12 as denominator 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.*
- 2 record sheets
Print copies of the Target 2 Record Sheet or make your own.
- Pencil or pen



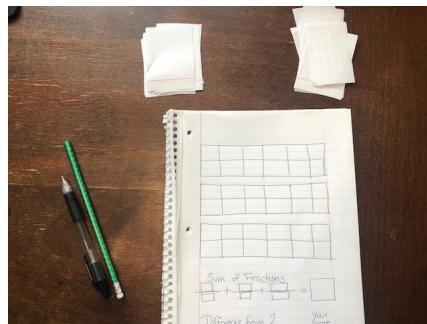
Skills

This game helps us practice:

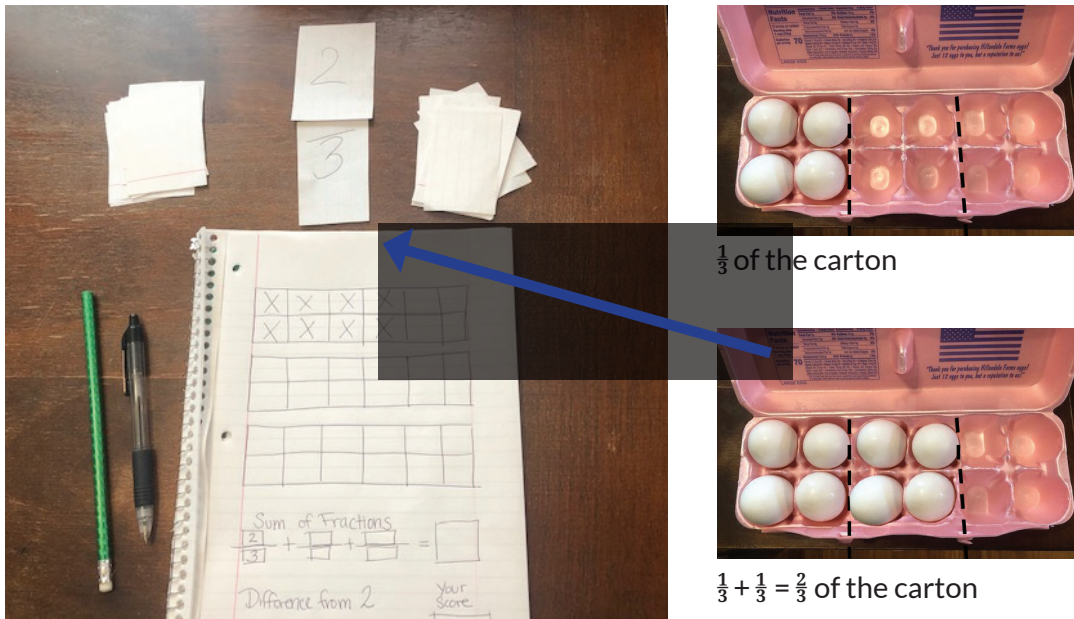
- Modeling fractions
- Adding fractions and mixed numbers
- Subtracting fractions and mixed numbers
- Representing fractions in more than one way

How to Play

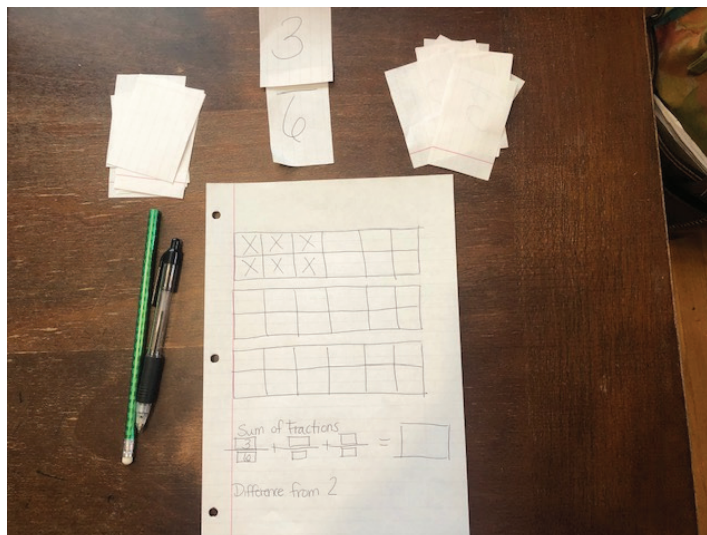
1. Lay the cards face-down in two piles: the numerator pile and the denominator pile.



2. Each player chooses a numerator card and a denominator card, forming a fraction. They model the fraction on one of the 2 x 6 arrays (the “egg cartons”) and write the fraction in the “Sum of Fractions” section of the record sheet, below the “egg cartons.”
 - » For more information about using the egg carton model, see the “Tips For Families” section at the end of these instructions

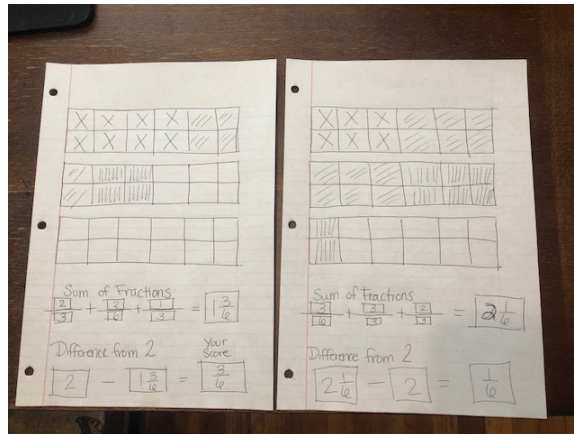


Mom pulled a numerator of 2 and a denominator of 3, making the fraction $\frac{2}{3}$. She can think about $\frac{1}{3}$ of an egg carton and then double it. If 4 eggs are $\frac{1}{3}$ of the carton, 8 eggs are $\frac{2}{3}$ of the carton. Mom fills in 8 Xs on the record sheet to show $\frac{2}{3}$.



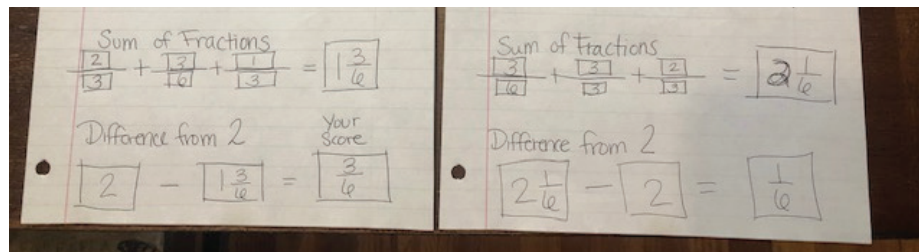
Sasha pulled a numerator of 3 and a denominator of 6, making the fraction $\frac{3}{6}$. She knows that $\frac{3}{6}$ is equal to $\frac{1}{2}$, so she fills in half of one egg carton with Xs.

- Each turn, fill in the blocks with either different colors or a different pattern so that you can see the three different fractions to be added.
- After three rounds, players find the sum of the fractions they filled in.



Mom added $\frac{2}{3} + \frac{3}{6} + \frac{1}{3}$ to get a total of $1 \frac{3}{6}$. Sasha added $\frac{3}{6} + \frac{3}{3} + \frac{2}{3}$ to get a total of $2 \frac{1}{6}$.

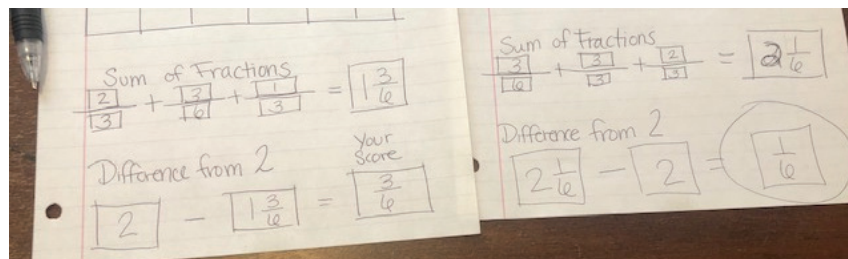
- Players then find the difference of their sum from 2. This is their score for the round.



Mom's total was less than 2 so she subtracted it from 2.

Sasha's total was greater than 2, so she subtracted 2 from her total.

- Both players write an inequality comparing their scores. The player with the lesser score wins.



$$\frac{1}{6} < \frac{3}{6} \quad \text{Sasha wins!}$$

Sasha's score of $\frac{1}{6}$ is less than Mom's score of $\frac{3}{6}$, so Sasha wins.

Tips for Families

Before you play:

- Think about what you know about fractions. You may have learned about using egg cartons to think about fractions at school. If not, or if you'd like to teach others how to use this model, here's how it works.

Have you seen a carton of eggs? Have you ever thought about using an egg carton to learn about fractions? Look at the different images below. Each one represents a fraction. Today you will add fractions by choosing cards and the player with a sum closest to 2 after three turns wins.



$$\frac{1}{12}$$



$$\frac{1}{3}$$



$$\frac{1}{6}$$

You don't have to use real eggs and egg cartons. You can use a drawing instead!

- Think about how each fraction will look when 1, 2, or 3 of them are filled in.
- Think about how you might model a fraction when 1 carton ends and another begins.

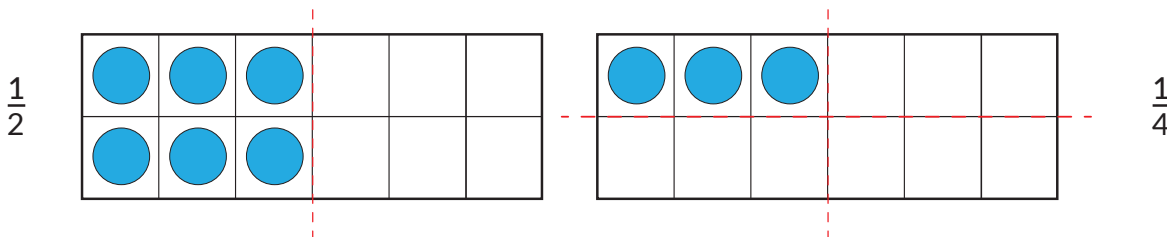
As you play:

- Talk about the fractions made. *Were any equivalent fractions made? What do you notice about the size of the denominator and the size of the fractional parts?*
- Find a way to compare Player 1's and Player 2's scores. Try writing each fraction as twelfths if you are confused. (Each block filled in is worth $\frac{1}{12}$.)

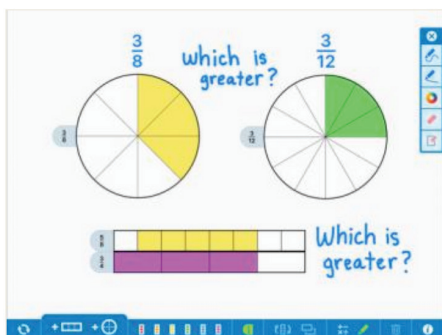
Change It Up

Making even small changes to a game can invite new ways of thinking about the math. Try making one of the changes below. How did it change your strategy for winning the game?

- Choose a different target number, such as 1 or 3.
- Change the cards you're using. Consider adding 2 and 4 as denominators.



- Check out Math Learning Center's free Fractions app.
Can you find different ways to model the fractions made during the game?



The free app is available for iPad,
Web and Chrome.

You can get it here:

[www.mathlearningcenter.org/
resources/apps/fractions](http://www.mathlearningcenter.org/resources/apps/fractions)



1

2

3

1

2

3

1

2

3



<div><div></div><div>3</div></div>	<div><div></div><div>6</div></div>	<div><div></div><div>12</div></div>
<div><div></div><div>3</div></div>	<div><div></div><div>6</div></div>	<div><div></div><div>12</div></div>
<div><div></div><div>3</div></div>	<div><div></div><div>6</div></div>	<div><div></div><div>12</div></div>



<div><div></div><div>2</div></div>	<div><div></div><div>4</div></div>
<div><div></div><div>2</div></div>	<div><div></div><div>4</div></div>
<div><div></div><div>2</div></div>	<div><div></div><div>4</div></div>

Target 2 Record Sheet

Name _____

Sum of
Fractions:

_____ + _____ + _____ =

--

Difference from 2:

--

—

--

=

Your Score:

--

Compare your score to your opponent's score using <, >, or =. Lower score wins!

_____ ○ _____