

F2 or Fraction Fun

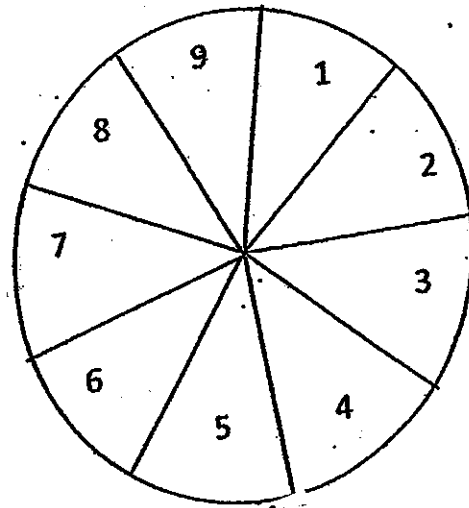
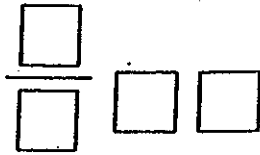
Sue Brown

University of Houston-Clear Lake

browns@uhcl.edu

Students continue to struggle with fractions. According to NAEP data, students lack a conceptual understanding of fractions. In this session, I presented a variety of activities to help students develop their understanding of fractions.

1. In this activity, two students use a 1-9 spinner and try to create the target fraction. It could be the largest fraction, the smallest fraction, the fraction closest to 0, $\frac{1}{2}$ or 1, or another target chosen by the teacher. After each spin, the student must place the number in one of four squares; the numerator, the denominator, or reject the number. Then students must show the fraction either by using manipulatives or drawing the fraction. Students score a point for showing the correct fraction and the student who is closest to the target wins.



2. I also demonstrated the use of the Fraction Kit from *About Teaching Mathematics: AK-8 Resource*, page 226.
3. Teachers also participated in two Marcy Cook activities using the number tiles. The activities were from *View A Fraction Tile* and *Fraction Tiles*.

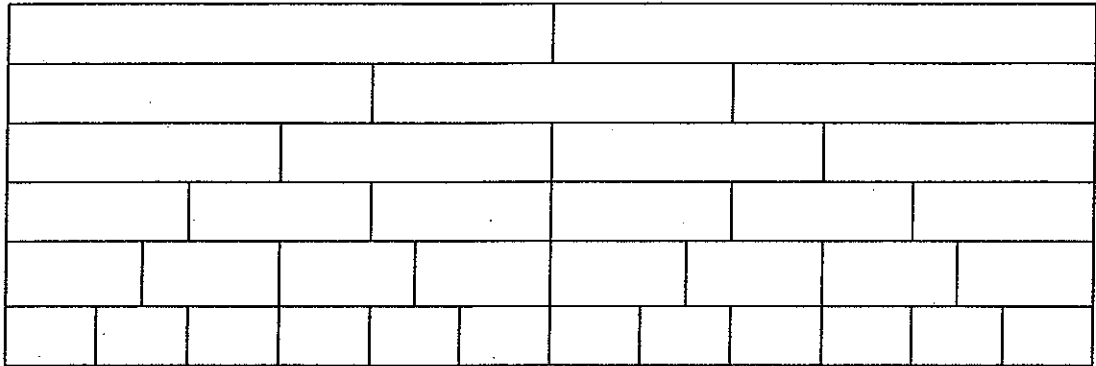
Color in Fractions

The object of this game is to roll dice to create fractions up to twelfths. Color in sections of the fraction wall (fraction strips) below that correspond to the fractions found after two rolls.

THE DICE

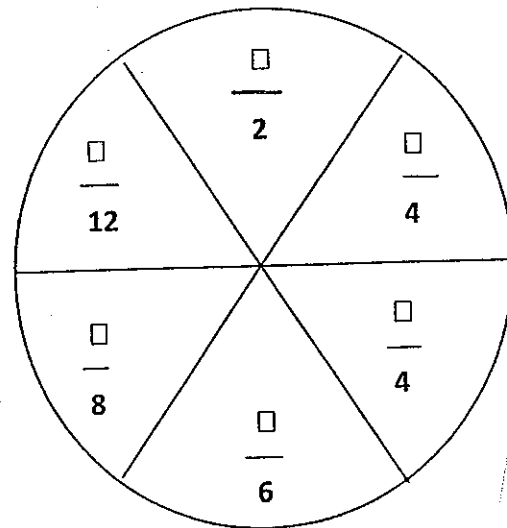
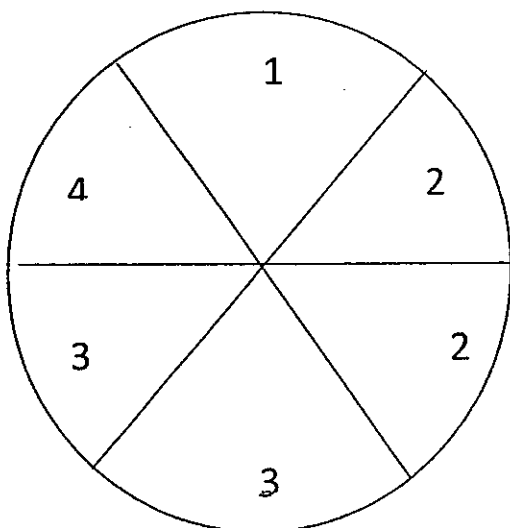
Die A has sides labeled 1, 2, 2, 3, 3, 4 in one color; its roll is the numerator.

Die B has sides labeled $\frac{\square}{2}$; $\frac{\square}{3}$; $\frac{\square}{4}$; $\frac{\square}{6}$; $\frac{\square}{8}$; $\frac{\square}{12}$; its roll is the denominator.



RULES OF THE GAME

1. Players take turns rolling both dice. Each player will make a fraction. Each row on the wall represents one whole.
2. Each player colors the fraction equivalent on the wall. For example, if a player throws 2 and $\frac{\square}{4}$, then he or she can color—
 - $\frac{2}{4}$ of one line,
 - $\frac{4}{8}$ of one line,
 - $\frac{1}{4}$ of one line and $\frac{2}{8}$ of another, or
 - Any other combination equaling $\frac{2}{4}$.
3. If players are unable to use their turn, they must "pass." The first player who is able to color the entire wall is the winner.



Fractions with Playing Cards

Materials: A deck of playing cards with face cards removed

Set up: Students work in pairs

Play. Choose a goal for the game. Possible goals are fraction closest to 0, $\frac{1}{2}$ or 1. Another possibility is larger or smaller fraction. Shuffle the cards and deal all cards face down. Each player turns up two cards to form a fraction. The ace counts as 1. The winner of each round is the player who has the fraction that meets to goal. The winner collects the four cards. If the fractions are equivalent, each player turns over two more cards. At the end of the game who ever has more cards is the winner.

Example: Goal: smallest fraction wins

$\frac{5}{2}$ and $\frac{2}{3}$ so $\frac{2}{3}$ wins

Spoons and Equivalent Fractions

Materials: Spoons (one less than # of players), Deck of equivalent fraction cards. I made mine. One set would be $\frac{1}{2}$, $\frac{1}{4}$, a circle with $\frac{1}{2}$ shaded, and a circle with $\frac{1}{4}$ shaded, for example.

Set up: Students can work in groups of 3 or 4

Directions:

1. The object is to collect four cards representing equivalent fractions and not to be the person left without a spoon. To begin, place the spoons (one fewer than the number of players) in the center of the table within grabbing reach of all players. Each player is dealt four cards, and the dealer keeps the deck.
2. The dealer picks a card from the deck and then discards one card from his hand, sliding it facedown to the player to his left. That player takes it, then picks one card from his hand and passes it to his left.
3. Each player in turn does the same, as quickly as possible. Each person should have four cards in his hand at all times. The player to the right of the dealer places discarded cards in a pile to his left to be used by the dealer when the original deck is used up.
4. Play continues until one player has four of a kind, at which time he takes a spoon from the pile. He may steal the spoon surreptitiously, continuing to pass cards until someone else notices. Or he may grab his spoon, creating a mad rush for spoons at the table.
5. The player left without a spoon has lost the round. If you like to keep score, that player is given an S. As players spell S-P-O-O-N-S, they are out. The player left at the end is the winner.