

## Make One

**Author:** Don Buckeye

**Description:** A card game using fractions.

**Objective:** To review the four basic operations with fractions.

### **Resources/Materials:**

Preparation of cards: Print the cards file (hard stock paper recommended). The deck contains the following 36 cards:

Two each of the following:

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

One each of the following eleven cards:

$\frac{3}{2}$ ,  $\frac{4}{3}$ ,  $\frac{8}{3}$ ,  $\frac{6}{5}$ ,  $\frac{8}{5}$ ,  $\frac{8}{7}$ , 2, 3, 4, 6, and 8.

**Activities/Procedures:** This card game can be played by 2-4 students.

**Rules:** Shuffle well and deal 5 cards face up to each player. The object of the game is to add, subtract, multiply, and divide the numbers on the 5 cards to "make one" by using as many cards as possible.

For example, if a player has a  $\frac{1}{2}$  and a  $\frac{2}{4}$  card, he may add them to "make one."

This player earns 2 points because he used 2 cards to "make one." Another

example: a player may have a  $\frac{4}{6}$ ,  $\frac{1}{3}$ ,  $\frac{2}{8}$ , 2 and 8. He may play all 5 cards in this manner:  $(\frac{4}{6} + \frac{1}{3}) \times [ (8 \times \frac{2}{8}) / 2 ]$ . He would receive 5 points.

Players should not announce their result until all players have had a

reasonable time to "make one." At the end of each round, each player draws as many additional cards from the deck as he used to "make one."

If a player cannot "make one" by using his cards - and that is highly unlikely - he may place any two cards from his hand at the bottom of the deck and draw two from the top of the deck. This can be done at the end of a round instead of "making one."

Play continues in this manner until all the cards are gone from the deck.

The winner is the player with the most number of points when the deck is gone. As a variation, the winner can be the first player to score 23 points.

**Evaluation:** Each student should check the others' answers.

**Follow-Up Activities:**

Variations:

1. Play as above. Instead of "making one" each player selects a "target" card from his hand. He next tries to combine as many of the remaining four cards as possible to equal the "target" card. His score on a given play is the number of cards used to form the number on the target card.

2. Shuffle well and deal 5 cards to each player. At a given signal, all players turn their cards face up. The object is to use all five cards to "make one." The first player to "make one" scores one point. Should player give a wrong solution, he is penalized 2 points. The first player to score a total of 5 point wins the game. If no player can "make one" within three minutes, the cards are reshuffled and new hands are dealt.

© 1994-2004 The Math Forum

<http://mathforum.org/>