

# Choosing the Best Average

Practice finding the *mean*, or average, of different data sets in this math card game. It's a great way to work on division and improve your fifth grader's understanding of statistics. All you need is a deck of cards, a score sheet, and a pencil, and you'll be ready to play! You'll find that, through practice, your child will become comfortable with finding the mean of a set of numbers. Check out the variations at the bottom of the page for ideas on how to adapt this game to practice other statistics concepts.

## Term to Know:

*mean*: the average of a set of numerical data; found by finding the sum of the elements, then dividing by the number of elements (For example, in a data set of 1, 4, 3, 6, and 1, the mean would be  $1 + 4 + 3 + 6 + 1 = 15 / 5 = 3$ .)

## What You Need:

- One deck of playing cards (Print a deck.)
- *Choosing the Best Average* record sheets (Print these out.)
- Pencil
- Calculator (optional)

## What You Do:

1. Shuffle the deck and deal 7 cards to each player.
2. Players record the value of their cards. For the purposes of this game, aces = 1, jacks = 11, queens = 12, and kings = 13.
3. Next, players find the *mean* of their cards. This is done by adding up the values of all 7 cards, then dividing by 7. (You may use a calculator for this step, if you'd like.)
4. Players record their mean on the record sheet.
5. Play continues for 10 rounds. At the end of 10 rounds, players should add up all of their means, then find its mean by dividing by ten.
6. The player with the highest final score wins.

## Variations:

- Simplify the scoring. Award a player either 1 or 0 points for each round, depending on whether or not they had the highest mean.
- Change the number of cards used in each round.
- Calculate *median*, or the number that falls exactly in the middle when the data is arranged in numerical order, instead of mean.
- Calculate *mode*, or the number that occurs the most. If there are multiple modes in a data set, the mean, or average, is taken from the total of the modes.
- Allow players to choose either the mean, median, or mode as their score for each round.
- Change the scoring so that each round is worth a letter in the word AVERAGE. In this variation, the first player to spell the entire word wins.

