

How Do Students Think about the Concept of Averages?

Studies of students' understanding of the concept of averages suggest that the following:

- Although students are able to compute averages, they do not understand the concept, nor are they able to apply it in context. Teachers must provide opportunities for students to interpret what computations mean with regard to the initial context.
- Students understand the concept of average in a variety of ways. Some ways of thinking about averages are richer than others.
- Students' understanding of the concept of averages progresses on a trajectory. Teachers should help students move from thinking of average as a "typical value" in a data set toward an understanding of average as a "representative" of a data set. Understanding average as a representative of a data set is important for the study of statistics later.
- In general, students do not always understand when it is appropriate to use mean, median, or mode. Teachers must give students opportunities to think about situations in which each of these measures of central tendency would be the most appropriate.

Based on Research on Students' Thinking and Reasoning about Averages and Measures of Center.

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