# Middle Schoolers? Biases and Strategies in a Fraction Comparison Task

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The present study uses a short, computerized task to investigate individual differences among middle school students in terms of the intuitions and strategies that they use to compare fractions. To tap into their intuitions about fractions, students were presented with pairs of fractions on the screen for a limited time of 10 s. Fraction pairs to be compared were controlled as to whether fractions shared or not a common component (numerator or denominator), as well as whether the greater fraction was the one with greater components or not. Data from about 500 students were processed with a clustering analysis based on these four item types, revealing distinct patterns of answers that we interpret in terms of strategies for answering the task. Half of the sample followed a simple larger-component-larger-fraction strategy as suggested by a congruency-based implementation of the natural number bias, although several clusters showed opposi