Greatest Product

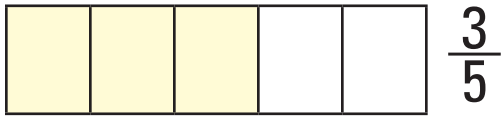
Building Fluency: multiply a fraction by a fraction

Materials: deck of cards; optional calculator with grid paper and colored pencils

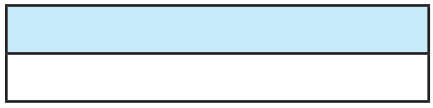
Number of Players: 2 or more

Directions:

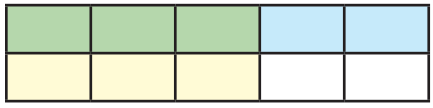
1. Use only the number cards from a deck of playing cards. Aces are worth one point each.
2. A fraction can be made by using two cards. One card is the numerator, and one card is the denominator.
3. Deal each player four number cards. Arrange the four cards to make a multiplication problem.
   Example: Let's say you were dealt [3], [1], [5], and [2] with these cards, you could make the fraction problem: $\frac{3}{5} \times \frac{1}{2}$
   (No fractions over one are allowed.)
4. Draw an area model to support your product.
   Example:



$\frac{3}{5}$



$\frac{1}{2}$



$\frac{3}{10}$

5. The player who forms the greatest product wins.
6. After you have played several rounds for the greatest product, play for the least product.

Variation/Extension: Student may want to record their work in their math notebook or use grid paper to create a model.

Allow students to create fractions over one – Why when multiplying a number by a fraction greater than 1 the results of the product is greater?

Another fun way to play the game is to allow the players to form their fractions first, and make their calculations before you say highest or lowest.