Division Game

This game was invented by my daughter Sophia when she was 8 years old. (So it's not really my math; it's my daughter's math.) She wanted to invent an interesting game that would give her practice with division. When playing it she would often comment on how much division we need to do if we are to be competitive in the game. She called the game *Demainder* - substituting the R in *remainder* for a D from *division.*

I find it interesting that she invented this game because she often talked very negatively about the mathematics she did for school. No one suggested that she invent a game to practice division. It was her idea. She is very good at mathematics but didn't enjoy doing worksheets and repetitive procedures.

Players:

- 2 players, who know how to divide small numbers

To Start:

- Take the face cards out of a standard playing card deck. This game requires the cards from 1 to 10.
- Deal ten cards to each player.
- Place the remainder of the cards in a pile face down.

The Object:

- The object of the game is to get rid of your cards.
- The first person to run out of cards (to have less than three cards) wins.

To Play:

- On your turn, you use three of your cards to make a division question for the other player. For example, you can make 10 divided by 3 by putting down a 9, an Ace and a 3, i.e. (9 + 1) ÷ 3.
- You take 3 cards from the deck to replace these three cards you just played.
- The other player can put down one or more cards to answer your division question (This is how she or he gets rid of her/his cards). She or he can play the quotient or the remainder. For example, if the question is 10 ÷ 3, as in above, the answer is 3 remainder 1.
  So the player could play an Ace to represent the remainder (1), a 3 to represent the quotient, or any combination of cards that add up to 3 to make the quotient (i.e., an Ace and a 2, or three Aces).
- If the other player cannot play an 'answer', she or he must pick up a card from the deck as a penalty, and you have the opportunity to play the answer to your own question. If you cannot answer your own question, you do not pick up from the deck.

- There is one limitation to the questions you can play: The question must have a solution that is greater than 1 remainder 1. The reason for this rule is to disallow questions that require an Ace for the answer. There aren't enough Aces.
- When the deck is depleted, shuffle the played cards to replenish the deck.

Strategy/Mathematics:

- The best questions to make give the other player limited choice for playing answers - for example, questions with low numbers for answers (high numbers make it possible for the other player to play out multiple cards), questions that have no remainder, or questions for which the quotient and the remainder are equal (e.g. for 10 ÷ 4, the answer is 2 remainder 2, so only 2 is a viable play).