## The Biggest Number

<table>
<thead>
<tr>
<th>Level</th>
<th>3 (Age group 11 – 14)</th>
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</table>
| **Resources Required** | Place value grid with ten thousands, thousands, hundreds, tens and ones  
Deck of playing cards  
Paper  
Pencil |
| **Alternate Options for the Resources** | Make a place value grid following the steps below:  
1. On a piece of paper draw five widely spaced columns  
2. Label the column on the left “Ten thousands” followed by “Thousands”  
   “Hundreds”, “Tens” and then “Ones” on the furthest right  
Players can use cards they have at home or make a deck of playing cards by following the steps below:  
1. Take a piece of card or paper and cut a rectangle the size of your palm  
2. On one side of the card, write the number ‘2’ and draw 2 hearts  
3. Repeat this for the numbers 2-10, each time drawing the same number of hearts as the number you wrote (the number 3 card has 3 hearts drawn etc)  
4. When one set of 2-10 is complete, then repeat this for a set of diamonds, clubs and spades.  
5. Then draw four sets of (A, K, Q, J)  
Once you have completed this, you should have 4 sets of 2-10 and A-J (52 cards in total) with each set having a different symbol. |
| **Strand Covered** | Number and Operations |
| **Targeted Skills** | Place value |
| **Inspired by** | Third Space Learning |
| **Time Required** | 10 minutes (if resources already available)  
12 minutes (if only place value grid needs to be made)  
30 minutes (if cards and place value grid both need to be made) |
| **Previous Learning Required** | Numbers from 1-99,999 |
| **Support Required** | Low support |

### Rules of the Game:

| Goal | The player with the most points at the end of the game wins. To win a point, the player needs to have the biggest number at the end of each set. |
| Rules | Once a card is placed in a column, the player is not allowed to move it to another column later. Players cannot use face cards, aces or jokers.  
Each player must draw the top card from the deck in the middle |
| Steps | Step 1: Make sure each player (2-4 players) has a place value grid |
Step 2: Shuffle the entire deck of cards and place it, face down, in the middle of the group

Step 3: Player one draws the top card from the pile and places it on their own place value grid (in any desired column). If the card drawn is a face card, ace or joker, the player cannot use it and must wait until it is his/her turn to draw again

Step 4: The player to player 1’s left picks the next card and places it on their own grid.

Step 5: Set 1 continues for 3 rounds (until all the players have filled out their grid)

Step 6: Players write out the number they have formed using the cards. The player with the biggest number at the end of set 1 gets one point. The number of sets played is 1 more than the number of players. For example, if there are 3 players, the number of sets played is 4.

Step 7: Once all the sets are complete the game ends

Suggestion for level 3: Step 8: players then express their final number as a decimal fraction. The denominator should have as many zeros as the number. For example, if a player gets the number 43229, he/she should express it as 43229/10000.

Step 9: Players form groups of 2 and divide the decimal fractions by each other

Step 10: The group that gets the biggest number at the end wins
### Variations of the Game

1. This game can be played with the objective of getting the smallest number. So, the player with the smallest number at the end of a set, gets one point.
2. This game can be played by increasing the number of place values to hundred thousands.

### Simplification

1. Instead of four place value columns, the game can be played with only 100s, 10s and 1s.
2. Once a player places a card in a column, during their next turn, they are allowed to switch the order of one pair of cards.