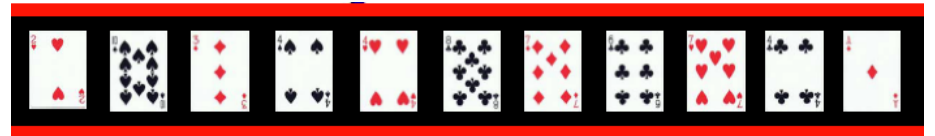


Multiplication/Division Chart

x/÷	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Games to Play with a Deck of Cards

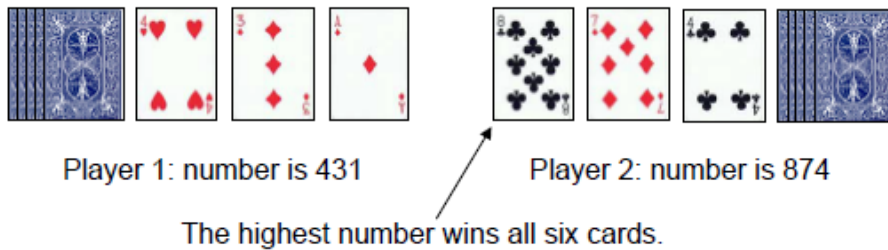


PLACE VALUE NUMBER BATTLE

Players: 2

Materials: Deck of cards with the faces cards and 10s removed, Ace worth one

How to Play: Players split a deck of cards and simultaneously flip over their top three cards to create a 3-digit number. Players may move the cards and place them in any position of the number they wish. The highest number wins all the cards.



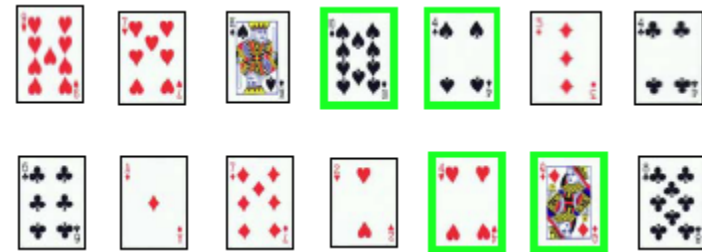
Increase the number of cards to flip if you want to work on larger numbers.

I SPY PRODUCTS

Players: 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11

How to Play: Deal out the entire deck of cards in a 13 x 4 array. *Example does not show the entire array due to space.*



One player challenges the other player to find two cards next to each other, either vertically or horizontally, that multiply to make a number by saying, "I spy two cards with a product of 40."



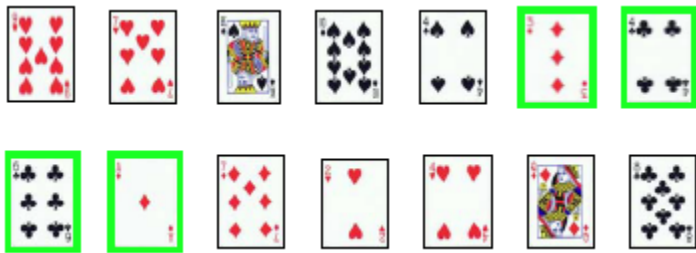
The other player looks for two cards that multiply to make the product and removes them. Players swap roles. As *large gaps appear, the size of the array may be reduced to help fill the gaps.*

I SPY SUMS

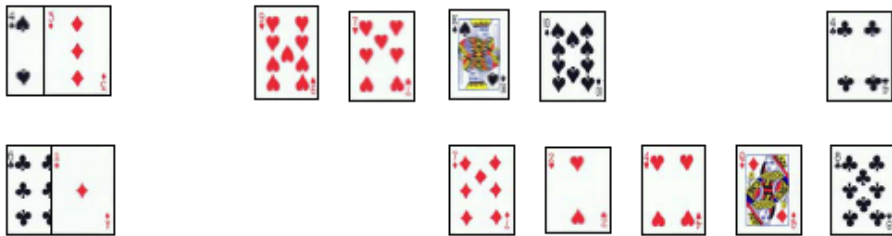
Players: 2

Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

How to Play: Deal out the entire deck of cards in a 13 x 4 array. *Example does not show the entire array due to space.*



One player challenges the other player to find two cards next to each other, either vertically or horizontally, that add to make a number by saying, "I spy two cards with a sum of 7."



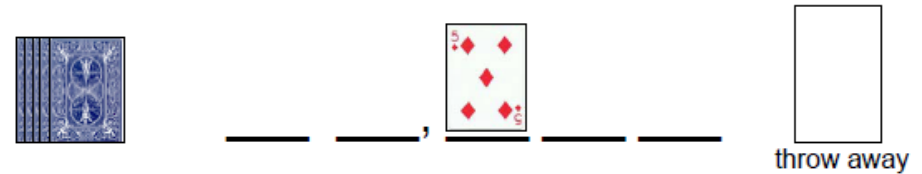
The other player looks for two cards that add to make the sum and removes them. Players swap roles. *As large gaps appear, the size of the array may be reduced to help fill the gaps.*

MAKE IT TEXAS SIZE

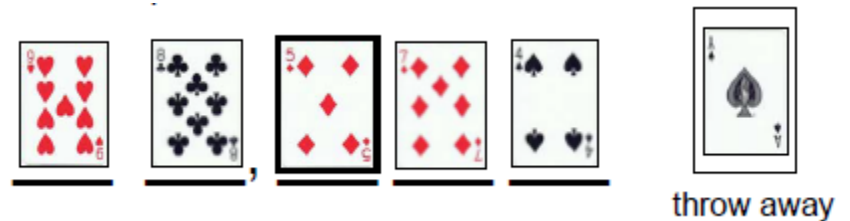
Players: 2

Materials: Deck of cards with the 10s removed, Ace worth 1, scratch paper

How to Play: Each player draws a game board like the one shown. Deal 6 cards to each player. This is a game of chance and strategy in which players are trying to create the largest number possible. Players must think carefully about where to place a card. **Once placed, a card cannot be moved.**



Each player flips over one card at a time and decides where to place it to form the largest number possible. The throw away box is for any card they feel will not help in creating a large number.



The player with the largest number wins.

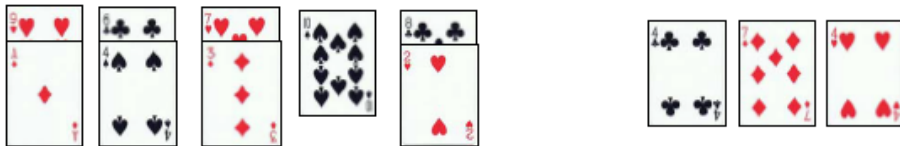
Variation: play to make the smallest number possible

GIVE ME 10

- Players:** 2
- Materials:** Deck of cards with the face cards removed, Ace worth one
- How to Play:** Deal 12 cards face up.



Players take turns finding and removing combinations of cards that add up to 10.

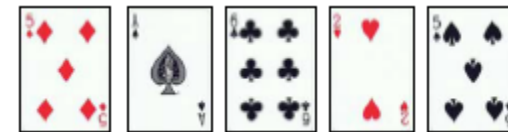


When both the players agree that no more tens are possible, the next 12 cards are dealt face up.

HIT THE TARGET

- Players:** 2
- Materials:** Deck of cards, Ace worth 1 or 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

How to Play: Select a target number from 1-30. One of the players turns five cards from the deck face up. Both players try to make a number sentence using all five cards with any operations to reach the target number.



For example, suppose the target number is 20 and the cards in play are 5, 5, 6, 2, and Ace (worth 1).

$$\begin{array}{c} 5 \\ \diamond \end{array} \times \begin{array}{c} 2 \\ \heartsuit \end{array} + \begin{array}{c} 5 \\ \spadesuit \end{array} + \begin{array}{c} 6 \\ \clubsuit \end{array} - \begin{array}{c} 1 \\ \spadesuit \end{array} = 20$$

One winning combination is: $5 \times 2 + 5 + 6 - 1 = 20$. Other combination would also work. The first player to find a winning combination keeps the cards and chooses the next target number.

MULTI-DIGIT MULTIPLICATION NUMBER BATTLE

Players: 2

Materials: Deck of cards with the face cards and 10s removed, Ace worth one, scratch paper

How to Play: Players split a deck of cards and simultaneously flip over their top three (or four) cards. Make two of them a 2-digit number and multiply by the third. The highest product wins all the cards.



Player 1: product is 261

Player 2: product is 384

The highest product wins all six (or eight) cards.

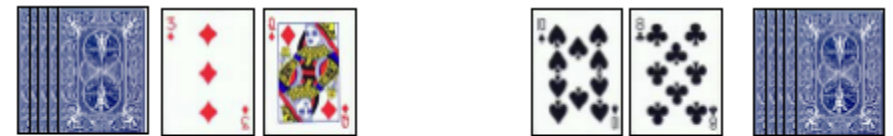
Increase the number of cards to flip if you want to work on larger numbers.

ADDITION NUMBER BATTLE

Players: 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11 (players decide)

How to Play: Players split a deck of cards and simultaneously flip over their top two and add the two cards together. The highest sum wins all the cards.

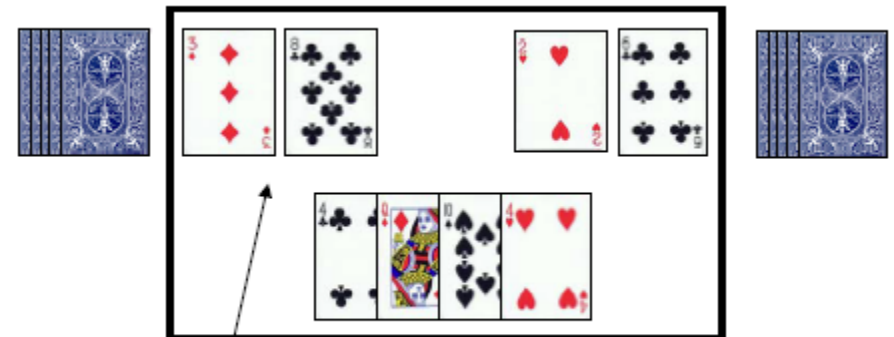


Player 1: sum is 13

Player 2: sum is 18

The highest sum wins all four cards.

If the cards have the same sum, the cards are placed in the center pile. The next hand is played normally and the winner takes all the cards.



Player 1: sum is 11

Player 2: sum is 8

MULTI-DIGIT SUBTRACTION BATTLE

Players: 2

Materials: Deck of cards with the face cards and 10s removed, Ace worth one

How to Play: Players split a deck of cards and simultaneously flip over their top three cards. Make two of them into a 2-digit number and subtract the third. Players may move the cards and place them in any position of the number they wish. The greatest difference wins all the cards.



Player 1: $98 - 3 = 95$

Player 2: $76 - 4 = 72$

The greatest difference wins all six cards.

Increase the number of cards to flip if you want to work on larger numbers.

MULTIPLICATION NUMBER BATTLE

Players: 2

Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11 (players decide)

How to Play: Players split a deck of cards, simultaneously flip over their top two cards, and multiply the two numbers. The greatest product wins all the cards.

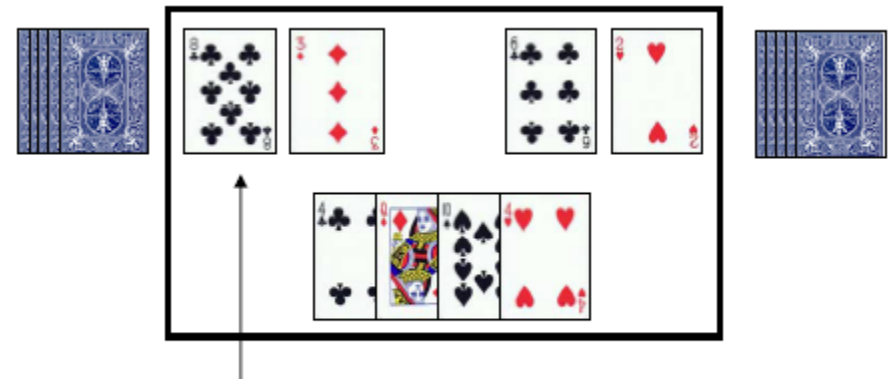


Player 1: product is 30

Player 2: product is 80

The highest product wins all four cards.

If the cards have the same product, the cards are placed in the center pile. The next hand is played normally and the winner takes all the cards.



Player 1: product is 24

Player 2: product is 12