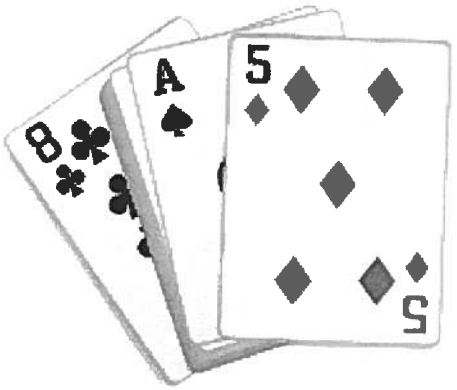
Multiplication/Division Chart

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

More card games:
http://www.pepnonprofit.org/uploads/2/7/7/2/2772238/acing_math.pdf

Games to Play with a Deck of Cards



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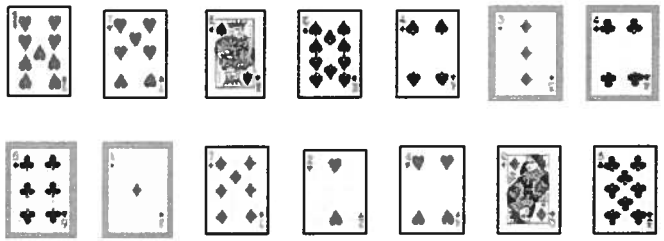
I SPY SUMS

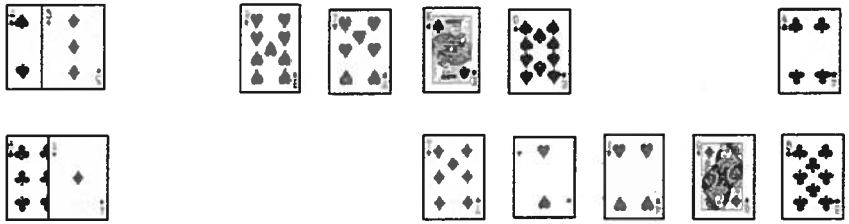
Players: 2

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.*

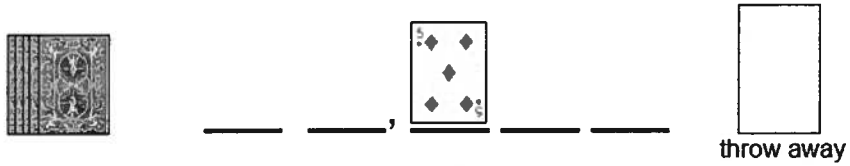
More card games:
http://www.pepnonprofit.org/uploads/2/7/7/2/2772238/acing_math.pdf

MAKE IT TEXAS SIZE

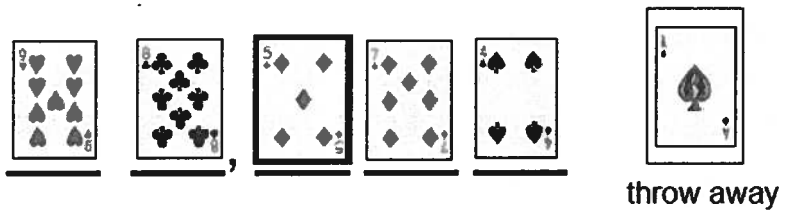
Players: 2

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

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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

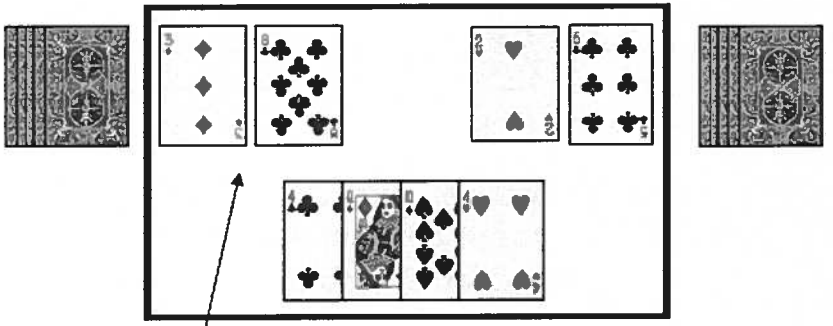
Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11 (players decide)

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

More card games:
http://www.pepnonprofit.org/uploads/2/7/7/2/2772238/acing_math.pdf

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SIMPLE MATH GAMES TO PLAY AT HOME
WITH A DECK OF CARDS

WAR AND DOUBLE WAR:

Use a regular deck of cards (optional: remove face cards for young children). Deal out the cards evenly between game participants. Aces represent one and face cards are ten. Play one of these versions:

Highest card wins: This is the traditional game where each player turns over the top card from their own pile and the player with the largest card wins all the cards. In the event of ties, everyone turns over an additional card and the winner takes the larger pile. In this version, students practice numeral recognition, number value, and greater than and less than.

Addition Double War: Follow the rules of War with each player turning over two cards at a time. Players add the value of their two cards and the largest sum wins. Students can practice addition strategies: counting all the "pips" on both cards for the sum, starting with one card and counting on using the pips on the second card, doubles facts, special "tricks" for adding ten and nine, sharing, and making a ten. To make this game a little more challenging, turn over three cards each time and find their sum.

Subtraction Double War: Follow the directions for Addition Double War, only the biggest difference wins. Good opportunity to practice subtraction strategies and facts.

Multiplication Double War: Follow the directions for Addition Double War, only this time the largest product wins. For a student just learning multiplication facts, use two decks of cards and start with the easiest fact families first, gradually adding the larger numbers.

Fraction War: Each player turns over 2 cards at once and tries to make the largest fraction by laying the cards vertically. For example with a 3 and 5, you can make 3/5 or 5/3; if the other person has a 2 and 8, the fraction could be 2/8 or 8/2. Variations: only allow fractions less than one or use three cards at a time and create mixed numerals.

SALUTE:

This game helps students practice adding (or multiplying) and finding the missing addend (or factor).

This is a game for three players. Remove the face cards from a regular deck of cards (ace represents one). Deal out the cards evenly to two players who sit facing each other; each holds the stack of cards face down. The third player sits where s/he can see the other two players. When the third player says "Salute," the two players with cards simultaneously take the top cards off their respective piles and hold them on their foreheads with the face of the card outwards so that they can only see the other person's card. The third player announces the sum (or product for a more advanced version) of the two cards. Each of the two players holding a card tries to be the first to announce the number on his own card (which he cannot see). The winner takes both cards. Rotate players so everyone gets a chance to be the one who says, "salute," and gives the sum and product.

PYRAMID:

Discard the face cards and use the aces to represent one. Lay out a pyramid of face up cards with one card at the top, two cards overlapping the bottom edge of that card, three cards overlapping the edges of the two cards, and so on, until there are six cards at the bottom of the pyramid. Only cards that are fully uncovered can be used. Pick up and discard cards with number combinations that equal ten. The easiest version is to discard cards in pairs that add up to ten (2 + 8, 3 + 7, etc.) and the ten by itself. Make the game progressively more challenging by allowing any combination of cards that can be strung together in an equation to equal ten, for example, 9 + 3 – 2 or 2 x 3 + 4. The game can also be played with the face cards with these values: J is 11, Q is 12, and K is 13 (change the target number to 13 for this version).