Fun with a Deck of Cards

Here are some fun math games your children can play using just playing cards.

1) Pyramid

To Set Up Pyramid: A Math Card Game to Make Ten

First, remove all face cards (except Ace, which will represent the number one) and jokers from your deck of cards and shuffle well. Then arrange your cards into a Pyramid with 6 rows, as shown below, with each row slightly overlapping the previous row.

Place remaining cards in a deck, face down, off to the side.

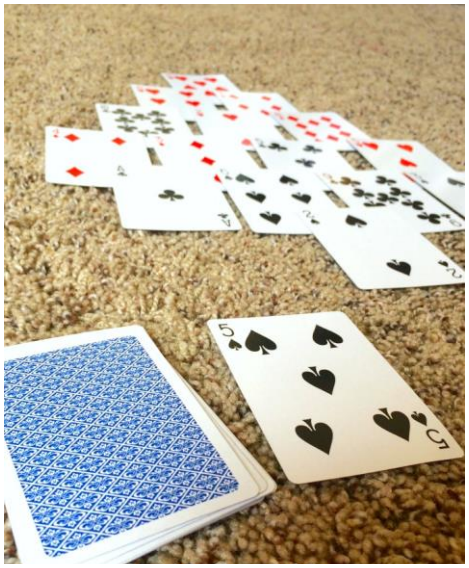
To Play Pyramid:

The goal is to remove cards in the pyramid by "making ten" with two cards**.** (Or removing a ten card, as it is already equal to ten). However, you can only remove cards that are completely uncovered. Therefore, at the start of the game, you can only use the bottom row of the pyramid to make ten.

So, for example, in the picture shown on the last page, you could remove a nine and an ace to make ten.

Then, I was able to remove the ten in the next row, because it had been completely uncovered.

At this point, all that was available was an ace, a two and a seven. No two cards remaining could make ten, but the game is not over! Remember the deck of cards off to the side? These can be drawn from to try and find a needed card. So, when there is no other option in your pyramid, draw a card from the deck**.**



Continue to draw until you can make another ten. Remove those cards and continue to play in the same way. If you make it through the entire deck, you can flip them over and begin drawing again.
The game is over when you can no longer remove cards from your pyramid.

To Win the Game:

Once you are stuck and can no longer remove any more cards**,** add all the remaining cards to determine your score. The person with the smallest number wins**!**

- **This game idea comes from *Math Geek Mama***
  https://mathgeekmama.com/

2) Close Call: Addicting 2-Digit Addition Card Game

How to Play Close Call:

The object of this game is to accumulate the highest score by coming closer to the goal than your opponent.

Start with a complete deck of cards. Ace = 1, Joker = 0 and all tens and other face cards are removed. Shuffle the deck and deal each player 6 cards.

Players then select 4 of the cards to create two 2-digit numbers. The object is to create two numbers that when added together come as close to 100 as possible, without going over.

For example, in this hand cards 2,3,4, and 5 were selected.

Can then create the numbers 53 and 42, which when added together total 95.

How to Win Close Call:

The player with the total closest to 100 wins the round and 1 point. In the event of a tie, each player receives a point.

After playing 5 rounds, the player with the most points wins.

Variations to the Game:

If you'd like to play this with younger kids, deal 4 cards to each and select 2 cards to get as close to ten as possible, without going over.

Or to practice subtraction instead, change the rules to subtract 2 numbers to get as close to zero as possible.

Or for a greater challenge for older kids, practice with integer operations. Make black cards positive and red cards negative, and again, challenge kids to combine numbers to get as close to zero as possible.

❖ **This game idea comes from *Math Geek Mama***
https://mathgeekmama.com/

3) Math War

Using a deck of playing cards play "war" to practice facts. Split the cards between the two players. Turn over the top two cards – you can either add, subtract (keeping positive answers) or multiply the two cards to see who wins. The winner takes all 4 cards, and you play again just like the traditional card game of war. Whoever has the most cards at the end wins!

4) I Spy with My Little Eye

This card game is for two players. You will need one deck of cards with the picture cards removed (40 cards remaining).

Instructions

1. The cards are dealt face up in an array, either a 10 x 4 or 8 x 5 array.

2. The first player challenges the other one to find two cards next to each other that add to make a particular number. The first player says, “I spy with my little eye two cards that add to make _____.”

3. The second player then looks for 2 cards that add to make the number. The two cards to be added need to be next to each other either horizontally or vertically. The player then picks the cards up to add them to their pile. They do this with any other pairs that add to make the number as well.

4. If the second player misses any pairs that add to the number, then player one may claim them.

5. The players alternate taking turns and continue until all the cards are gone.

6. The winner is the player with the most cards at the end of the game.

7. As large gaps appear in the array, move the cards closer together to fill those gaps.

Variations

You could change the operation that students use, for example, multiplication or subtraction.

Allow your students to add three numbers together.
You could also allow students to add pairs of cards diagonally.

- **This game idea comes from *Top Notch Teaching***
  https://topnotchteaching.com/

5) First to Add it Up

This card game is suitable for 2 – 4 players. You will need one deck of cards and pencil and paper to keep track of each player's scores. In this game, picture cards = 10 and ace = 1.

Instructions

1. Shuffle the cards and have them in the center facing down.

2. One player draws 3 cards from the deck and lays them face up in the middle.

3. Players must add the 3 cards to find the total. The first player to call the total of the 3 cards (correctly) is awarded that number of points.

4. No points are awarded for an incorrect answer.

5. Play continues with each player having a turn at revealing the 3 cards.

6. The winner is the player with the highest number of points when all cards have been turned over.

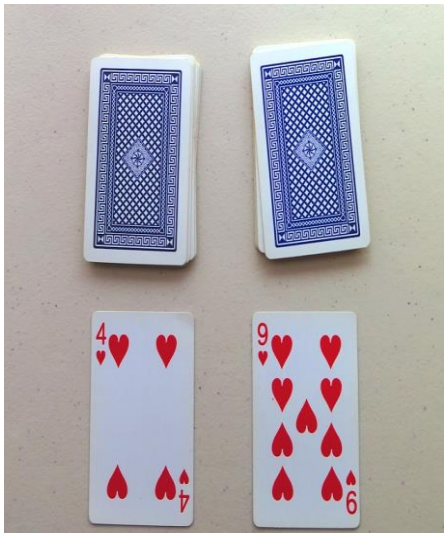
Variations

You could draw any number of cards, for example 2, 4 or even 5.
Use multiplication instead of addition.

- **This game idea comes from *Top Notch Teaching***
  https://topnotchteaching.com/

6) Fast Facts

This card game is suitable for 2 players. You will need one deck of cards with the picture cards removed. In this game aces = 1.



Instructions

1. Deal out half the cards to each player with the cards facing down in a pile.

2. Both players take the card on the top of their pile and lay it face up in the middle.

3. The first player to call out the product of the two cards wins both cards.

4. If it is a draw the cards are left on the table. Turn 2 more cards over and whichever player wins, picks up all the cards in the middle.

5. The winner is the player with the most cards once all the card have been used.

Variations

You could also use addition or subtraction.

- **This game idea comes from *Top Notch Teaching***
  https://topnotchteaching.com/

7) Triple Digit Dare: Engaging Place Value Card Game

Basic Version

1. Use a standard deck of playing cards with the 10s, Jacks, Queens, and Kings removed. Aces count as 1.
Note: I recently played with Queens as zeros, and Maggie keeps the Jokers in as Wild cards that can be used for any digit.

2. Deal each player 3 cards.

3. Players use the cards to create the largest 3-digit number possible.

4. Players show their cards, and the player with the greatest 3-digit number takes all the cards.

5. Play continues with 3 more cards for each player.

You could easily vary this game to use 2-digit, 4-digit, or even larger numbers.

Advanced Version

Once the students master the basic version, Maggie introduces a new version of the game, this one with an added twist of strategy.

1. Same standard deck of cards with the same cards removed.

2. Each player still gets 3 cards.

3. Remaining cards are placed face down in the middle of the table.

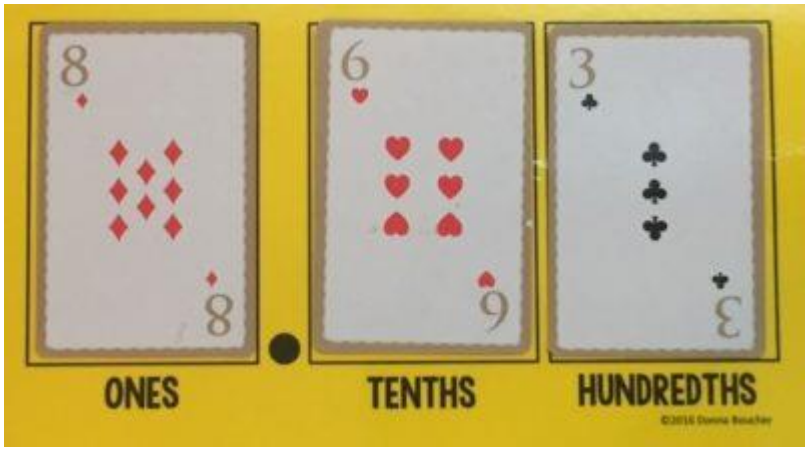
4. After each player looks at their cards and determines their greatest 3-digit number, the fun starts! Taking turns, each player has the option to…

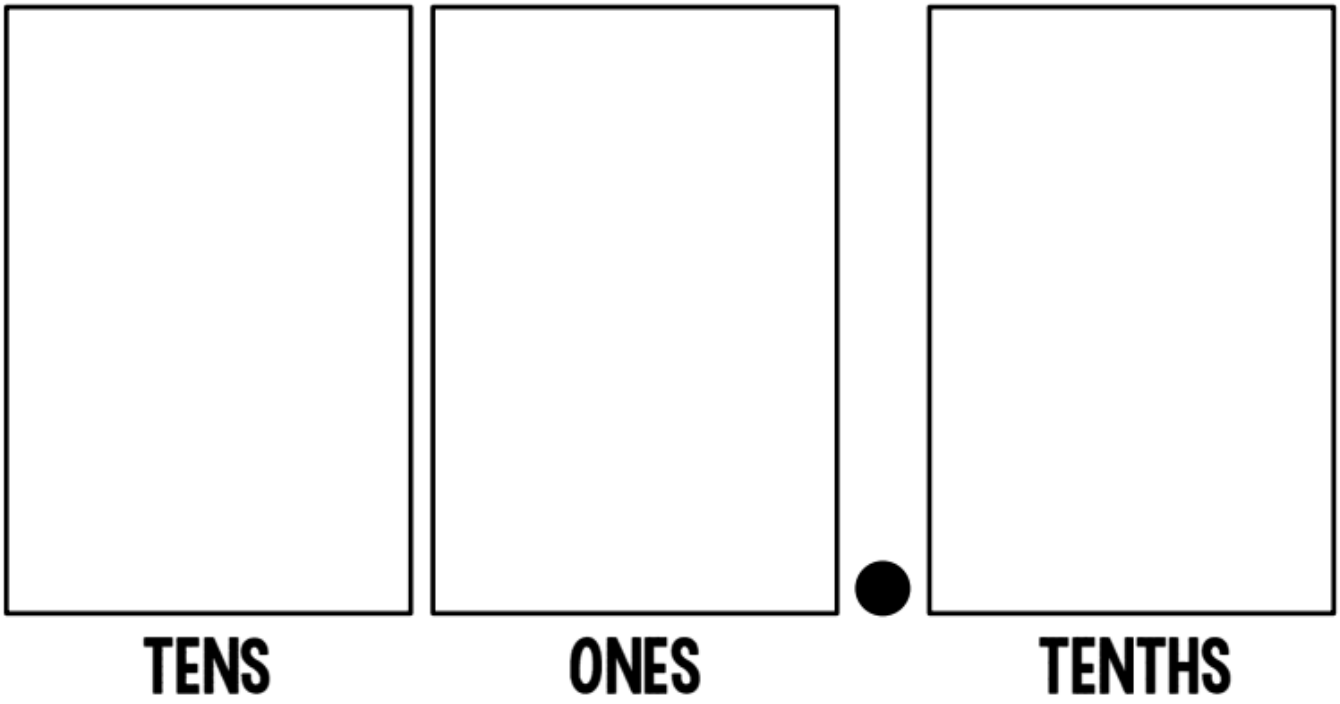
- Stick–keep their 3 cards
- Swap–remove one card from their hand and take a new card from the pile in the middle of the table
- Steal–trade a card from their hand for a card from any other player's hand (without looking at what card they are picking)

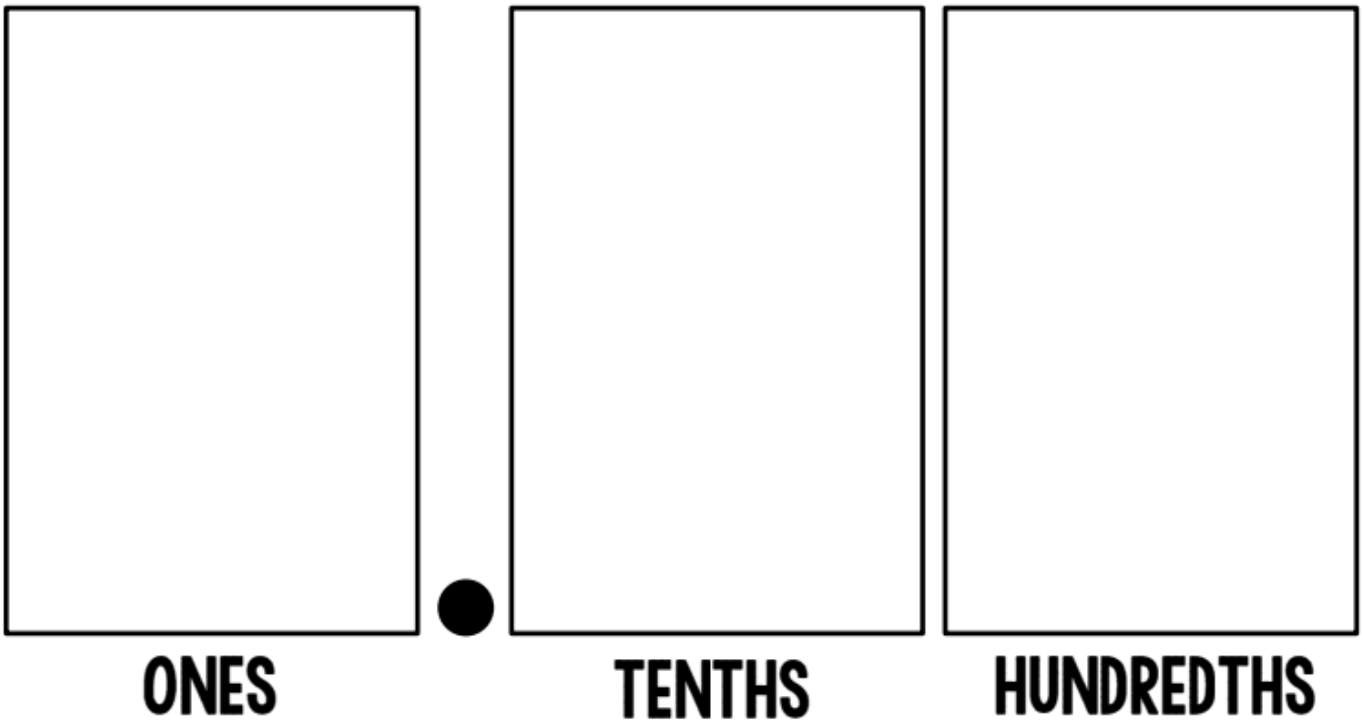
5. After all players have had a turn to adjust their cards, players show their cards and the greatest 3-digit number wins.

Decimal Version

Make your own mat and play a decimal version - the rules would be exactly the same. One game board has ones, tenths, and hundredths and the other board has tens, ones, and tenths.







- **This game idea comes from *Math Coach's Corner***
  https://www.mathcoachscorner.com/

8) Hit Me

Math concepts: addition, subtraction, negative numbers, mental math, absolute value
Number of players: any number
Equipment: playing cards (two decks may be needed for a large group)

Set Up

One player (the dealer) shuffles the math cards and deals one card face down for each player, beginning with the player on his left and proceeding in turn around the table. Then he deals one card face up beside each face down card.

How to Play

- Players do not pick up their cards! Each player may peek at his own face down card as often as he likes, but it remains hidden from the other players until the end of the round. The card that is face up remains visible to all players.

- Each player mentally calculates the sum of the numbers on his cards. Aces count as 1. Black cards (positive numbers) are added to the total; red cards (negative numbers) are subtracted. A player's score may go below zero.
- When all players have had a chance to check their cards, the dealer asks each in turn whether he wants a hit — an extra card, also dealt face up so everyone can see it. If the player wants the extra card, he says, "Hit me!" Last of all, the dealer may take a hit, if he wishes.
- Then each player in turn has a chance to ask for a second hit, and then a third, and so forth.
- Players may take up to 5 hits, for a maximum of 7 cards, or they may hold (stick with the cards they already have) at any time.

Endgame

The round is over when all the players have either taken their maximum number of hits or refused any more cards. At the end of the round, each player turns his hidden card face up and announces his score.

The player with the lowest absolute value (the sum closest to zero, whether positive or negative) wins the round. When every player has had a chance to deal, whoever has won the most rounds is the champion.

Variations

- Keep a running total of each player's scores. After everyone has dealt, the player who has the lowest total absolute value is the winner.
- Rather than bothering to keep score, we let the winner of each round deal the next one. If there is a tie, then whoever has not dealt recently gets a chance.

❖ **This game idea comes from *Denise Gaskin's Lets Play Math***
https://denisegaskins.com/

9) Target

A pre-algebra card game

Skill: Order of Operations
Materials: deck of playing cards pencil and paper for each player
Number of Players: 2 - 4

Preparation: Remove the face cards from the deck. (Aces, Kings, Queens, and Jacks - but leave the two Jokers in.)

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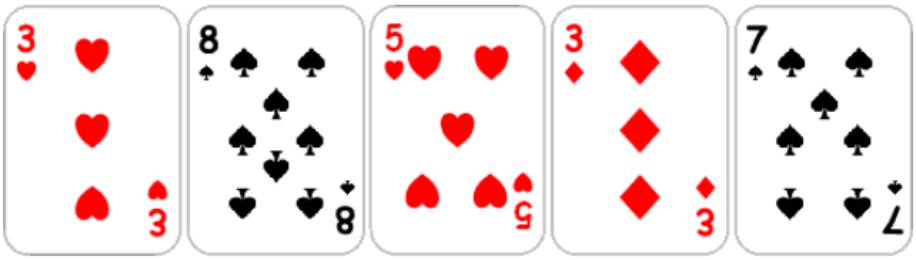
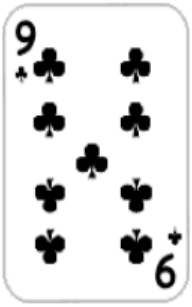
How to Play:

- Player 1 shuffles the deck of cards and then places the top five cards face up in a row in the middle of the players. Let's say they deal the five cards below.

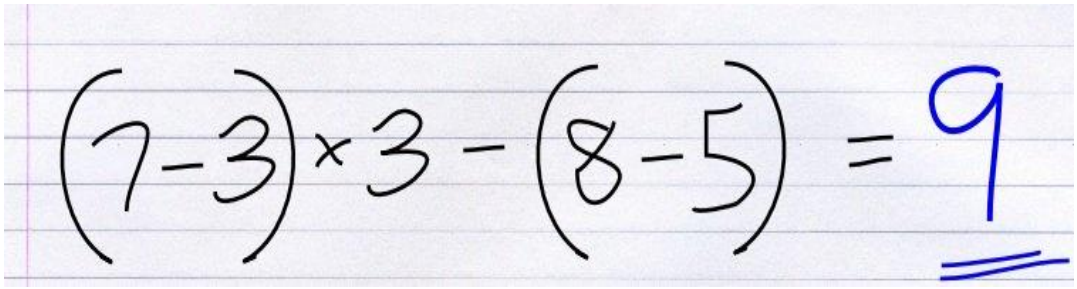


- Place the rest of the deck face down in middle of players. Turn over the top card of the deck and place this card face up next to the last card. This is the **target number**. So, let's say they turned over a nine card.



- The players will try to reach this number by using the five cards and the **order of operations**.
- Each player will then use their pencil and scratch paper and try to come up with an equation that equals the target number (in this case 9).
- Each player must use at least two of the numbers from the original five cards laid down.
- Each number can only be used once, unless that number was placed more than once in the original five cards. So, for our example above, 3 can be used two times if the player chooses to.

Below is a possible equation to get to nine.



- After a specified amount of time, each player will reveal if they were able to reach the target number and if so, the other players will check to make sure they performed the math correctly.
- Whoever cannot come up with a correct equation to reach the target number receives no points for that round.
- **Scoring** - Players earn 3 points for a correct equation. Player earns 3 bonus points for using all five cards. If a player has an incorrect equation they lose 2 points.
- If no player can come up with an equation, pick up the five cards and put them off to the side in a discard pile. Pull the top five cards from the deck and lay them side by side and repeat the process as before with each player trying to reach the target number.

❖ **This game idea comes from *Learn with Math Games***
https://www.learn-with-math-games.com/

10) Gain or Loss

Materials

- One deck of cards
- Recording Sheet- one per player

Number of Players
Two to Four

Object
Have the highest total after 20 rounds.

How to Play

1. Shuffle a deck of cards, place in pile, face down. Use only numbers 2-10. You can use the face cards, just assign a number value to them. For example - Jack is 11 Queen is 12 King is 13 and Ace is 14 or 1.

2. Each student needs his or her own recording sheet.

3. Each player automatically starts with 15 pts. Players take turns drawing one card at a time. They add or subtract depending on what card they draw.

4. Black cards are the GAIN meaning ADD
   Red cards are the LOSS meaning SUBTRACT

5. Students continue taking turns drawing one card at a time, recording their card, and adding or subtracting. If the pile of cards runs out, shuffle and put back into stack.

6. At the end of 20 rounds, the person with the highest total wins!

❖ **This game idea comes from *Guided Math***
http://www.guided-math.com/

Gain and Loss

Black Cards + **Red Cards** −

Card Value	Action	Previous Total	New Total
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

11) Trash

Playing Trash

- 2 players use 1 deck of playing cards
- 3 players or more use 2 decks of playing cards
- Leave all cards in deck:
  A-10 are in play
  Kings and Jokers are Wild Cards

1) Dealing:

Shuffle, then deal each player 10 cards face down, no looking!
Like this:

The remaining deck is placed in the middle.

The point of the game is to line up your cards from Ace through 10 before you opponents do.

2) Playing:

The first player draws a card from the center deck. If it's an Ace through a 10, place that card in its correct location. For all remaining turns, each player chooses from the deck or the discard pile.

Example: In this photo, I drew a 2, so I am flipping up the card in the 2 position…

Whatever card you flip, may also be played! I just flipped a 3 that I can use as well in the 3 position…

Wild Cards, King & Joker, may be played anywhere in your hand at any time.

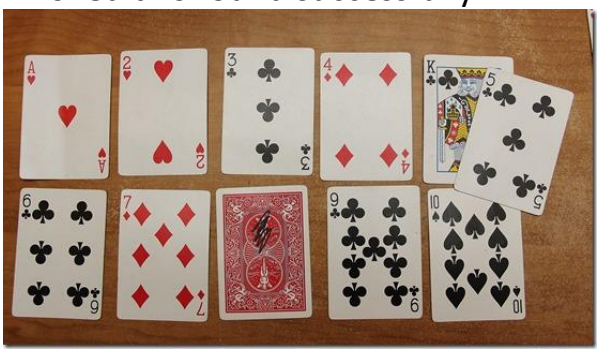
You keep flipping cards like this until you get a number you cannot use, then discard and your turn is over.

Example: Under the 3 position was an 8 – the player didn't need it because it was already filled with a flipped 8, so I discarded it and my turn was over.

The other player could choose to grab the 8 from the discard pile or draw a fresh card from the stack.

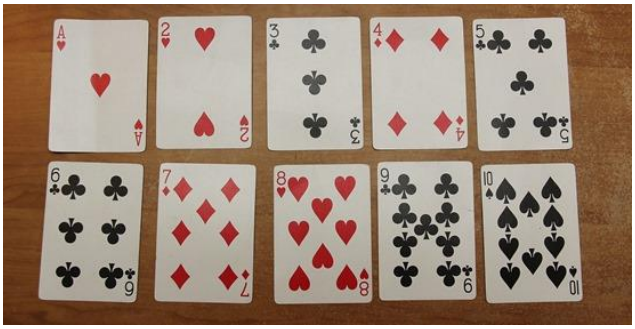
If you draw a card that can replace one of your Wild Cards, do so and use the Wild Card again in another spot!

Example: Here the player drew a 5 from the draw pile. It can replace the Wild Card King, and he will go down on 8's position. Because of this, the player would have finished this round successfully.

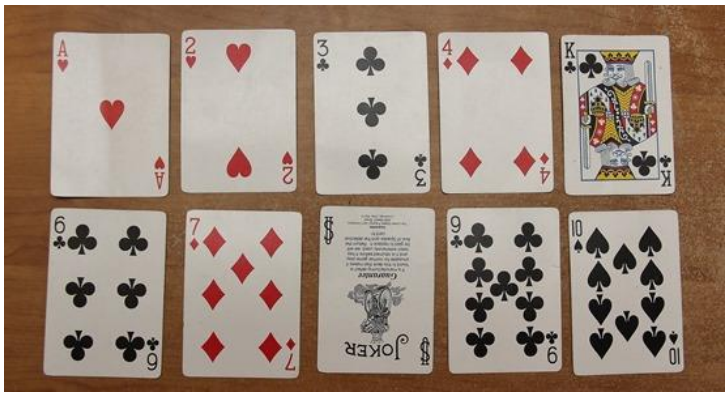


3) Winning A Round:

When a player has assembled all cards Ace through 10 in front of him, he wins that Round.



Remember, you can win with Wild Cards in place too! Like this:



Remember, Wilds are Joker and King!

After the Round winner flips his last card, each player has ONE last chance to draw a card and use it. They may also flip over all remaining cards, per the chance that they actually can use those cards and finish their Ace-10, Wild cards and all.
{Sometimes it really does happen!}

4) Round 2 & Winning the Whole Game:
The deck is reshuffled and dealt again, only now, ALL of the previous round winners who completed Ace through 10, only get NINE cards. They will spend the next round assembling Ace through Nine.

If you didn't win the round, you once again have to try to do Ace through 10 until you complete it.

This continues Ace-8, Ace-7, Ace-6 on and on, until one player gets down to one card in front of him and draws an Ace. That player wins the entire game!

- **This game idea comes from *4 Little Fergusons***
  https://4littlefergusons.wordpress.com/