# Math War

Most people know the “classic” version of the card game War. It’s played like this:

1. Take the jokers out of a standard deck of cards.
2. Shuffle the cards.
3. Deal out the entire deck to 2 players.
4. Both players turn over their top card at the same time. The player with the higher card takes both cards and adds them to the bottom of his or her pile.

*If both cards are the same:*

1. Each player puts three cards face down on top of the equal cards that were just played.
2. Both players turn over their next card.
3. The player with the higher card takes all the cards in the pile!

*If the same thing happens again—if the second set of cards have the same value—repeat Steps a-c again.*

1. Continue until one player has all of the cards. Or if you don’t have enough time for that, play once through the deck, or for some period of time you agree on beforehand, and count up to see who has the most cards.

This section describes variations of the classic game of War that can be played to help your child learn specific math facts.

## 1-10 War (Kindergarten, Reading and Ordering Numbers)

Number of players: Two

What you need: A regular deck of cards with face cards (kings, queens, jacks, jokers) removed, and with the aces used for the number 1.

How to play: Same as the classic version.

## Place Value War (K-2, Learning Place Values)

Number of players: Two

**Example**

32 < 51

What you need: A regular deck of cards with the tens, kings, jacks, and jokers removed. Aces are used for the number 1, and queens are used for the number 0.

How to play: Players turn over their top *two* cards on each turn. Each player uses his or her cards to make the biggest 2-digit number possible. The higher number takes all four cards.

* In case of a war (same 2-digit number), each player puts two cards face down, and then the next two face up. Each player uses the two face-up cards to make a new 2-digit number.

Variation: Turn over three cards and make 3-digit numbers.

## Addition War (Grades 1-2, Addition)

Number of players: Two

 + = 13

**Example**

What you need: A regular deck of cards with the tens, kings, jacks, and jokers removed. Aces are used for the number 1, and queens are used for the number 0.

How to play: Players turn over their top *two* cards on each turn. Each player adds the numbers on his or her two cards. The highest sum takes all four cards.

* In case of a war (same sum), each player puts two cards face down, and then the next two face up. Each player adds the two face-up cards to make a new sum.

## Subtraction War (Grades 1-3, Subtraction)

Number of players: Two

What you need: A regular deck of cards with the tens, kings, jacks, and jokers removed. Aces are used for the number 1, and queens are used for the number 0.

How to play:

***Small numbers version (grade 1):*** Players turn over their top *two* cards on each turn. Each player subtracts the smaller number from the larger number. The larger difference takes all four cards.

 – = 5

**Example**

* In case of a war (same difference), each player puts two cards face down, and then the next two face up. Each player subtracts the two face-up cards to make a new difference.

***“Teens” version (grades 1-3):*** Players turn over their top *two* cards on each turn. Each player adds 10 to the smaller card to make a teen number. For example, if a player has a 2 and a 4, the player adds 10 to the 2 to make 12. The player then subtracts the smaller number: for example, 12 – 4 = 8.

1 – = 4

**Example**

* In case of a war (same difference), each player puts two cards face down, and then the next two face up. Each player subtracts the two face-up cards to make a new difference, using the rules for this version of the game.

***Black and red version (grades 1-3):*** Players turn over their top *two* cards on each turn. Black numbers count as teens and red numbers count as single digits, and the smaller number is subtracted from the larger number. For example, if a player has a black 3 and a red 7, the problem is 13 – 7.

1 – 1 = 2

**Example**

* In case of a war (same difference), each player puts two cards face down, and then the next two face up. Each player subtracts the two face-up cards to make a new difference, using the rules for this version of the game.

## Multiplication War (Grades 3-4, Multiplication)

Number of players: Two

 **×** = **70**

**Example**

What you need: A regular deck of cards with face cards (kings, queens, jacks, jokers) removed, and with the aces used for the number 1.

How to play: Players turn over their top *two* cards on each turn and multiply the numbers together. The highest product takes all four cards.

* In case of a war (same product), each player puts two cards face down, and then the next two face up. Each player multiplies the two face-up cards to make a new product.

## Division War (Grades 4-6, Division)

Number of players: Two

What you need: A regular deck of cards with the tens, kings, jacks, and jokers removed. Aces are used for the number 1, and queens are used for the number 0.

How to play: Players turn over their top *three* cards on each turn and make a division problem in the following way:

1. Use two cards to make a 2-digit number.
2. Divide the 2-digit number by the number on the third card. Ignore the remainder (the part that’s left over once you divide).
3. The larger quotient takes all six cards. (Reminder: The *quotient* is the number of times the smaller number goes in the larger number. For example, if you divide 12 by 4, the quotient is 3.)
* In case of a war (same quotient), each player puts two cards face down, and then the next three face up. Each player uses the three face-up cards to make a new division problem.

Note: Division War gives you lots of choices. For example, if you turn over cards 2, 5 and 8, you could make any of the following:

**Example**

* 25 ÷ 8 = 3 (remainder 1)

 **÷** = **6** (r 4)

* 28 ÷ 5 = 5 (remainder 3)
* 52 ÷ 8 = 6 (remainder 4)
* 58 ÷ 2 = 29 (no remainder)
* 85 ÷ 2 = 44 (remainder 1)
* 82 ÷ 5 = 16 (remainder 2)

Remember that you can never divide by 0. So if you happen to turn over three queens, the other player automatically wins that round!

## Fraction War (Grades 4-6, Fraction Comparison)

Number of players: Two

What you need: A regular deck of cards with face cards (kings, queens, jacks, jokers) removed, and with the aces used for the number 1.

How to play: Players turn over their top *two* cards and make a proper fraction with the two numbers (smaller number on top). The larger fraction takes all four cards.

* In case of a war (same fraction), each player puts two cards face down, and then the next two face up.
* Each player makes a new fraction.

**Example**

**<**

Variations:

***Older players:*** For fractions that are hard to compare, or if there is a disagreement, then players who have learned how to find common denominators should do that to find out which fraction is larger: each player figures out his or her fraction. In this example:

player one would figure out that 

and player two would figure out that .

***Younger players:*** For fractions that are hard to compare, or if there is a disagreement, players can use the fraction bars below to compare the fractions.

