

Sums. They're Math Magic

27 – Sum More Card Tricks

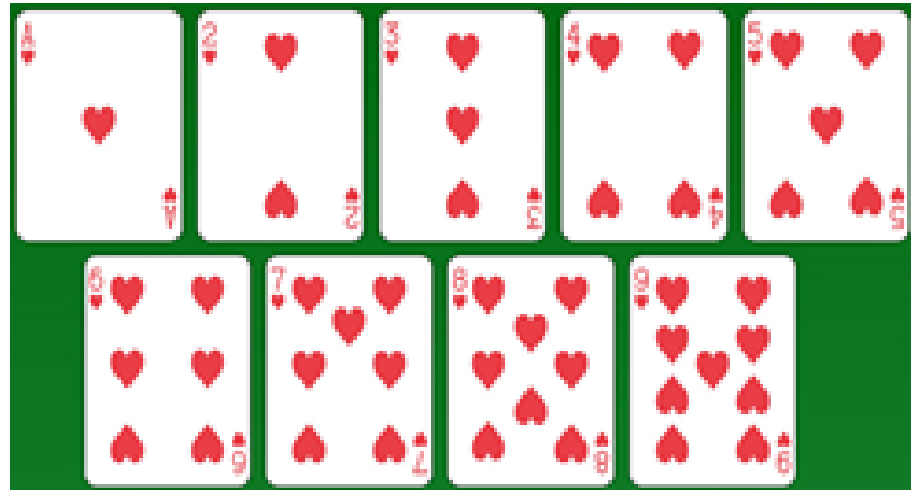
Please go through each slide stopping until you have understood the concept described

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All the same

Please arrange the nine cards in three rows of three so that all the rows and columns add up to the same number.



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All the same

Please arrange the nine cards in three rows of three so that all the rows and columns add up to the same number.

A	5	9
6	7	2
8	3	4

15
15
15

15
15
15

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Poker

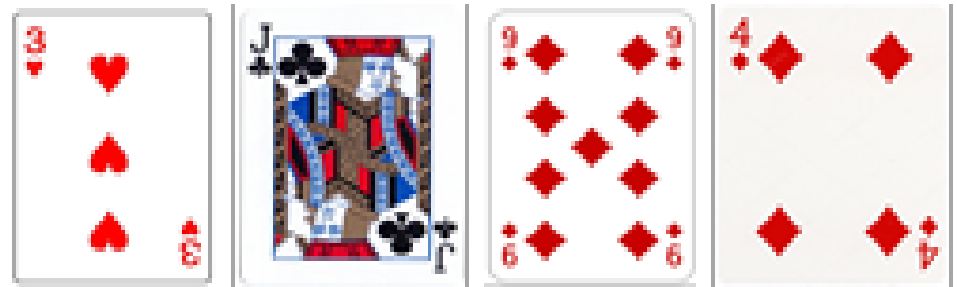
You have a full pack of 52 cards and you are playing alone.

They are Ace, 1,2,3,4,5,6,7,8,9,10,Jack, Queen and King for each of four suits.

Hearts, Spades, Diamonds and Clubs.

You have been dealt four cards opposite.

What are the odds of you getting 2 of a kind when your fifth card is dealt?



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Poker

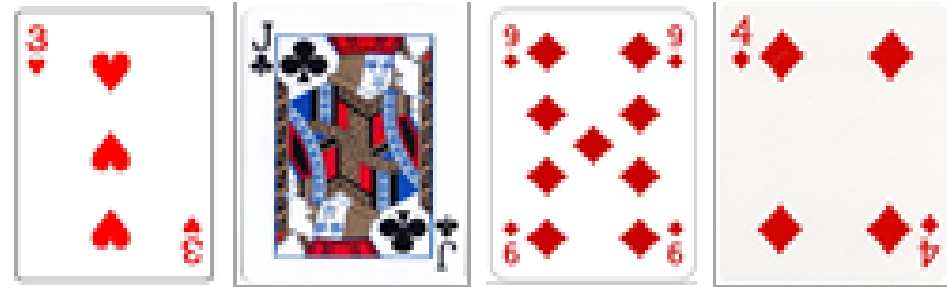
There are three more matching cards for each of the cards that you have.

In total there are 12 cards that can make at least one pair.

There are 48 cards left (the four of you already have 16 cards in total).

So you have 12 chances out of 48.

A probability of 0.25 or 25%



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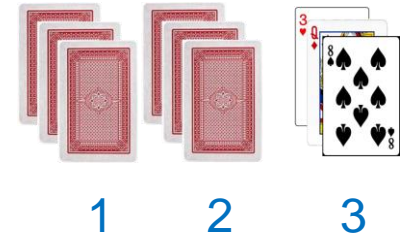
Nine Card Magic

Step 1	Ask a friend to pick nine cards and count them into three piles face down. Look at the bottom card of the third row and remember it. E.g. eight of spades
Step 2	Put row three on top of row 2 on top of row 1
Step 3	Ask the friend to spell the name of the number of the card – e.g. eight or king. As he/she does this put a card face down onto a new pile and then put the remaining cards on top of the pile.
Step 4	Put row three on top of row 2 on top of row 1
Step 5	Ask your friend to spell “of” as in “eight of spades”. As he/she does this put a card face down onto a new pile and then put the remaining cards on top of the pile.
Step 6	Put row three on top of row 2 on top of row 1
Step 7	Ask your friend to spell the name of the suit as in “spades”. As he/she does this put a card face down onto a new pile and then put the remaining cards on top of the pile.
Step 8	Put row three on top of row 2 on top of row 1
Step 9	Now ask him/her to spell the word “Magic” As he/she does this put a card face down onto a new pile but turn over the last card. It is the card your friend remembered. E.g. the eight of spades

It always works so please prove it!

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Nine Card Magic

At the beginning of step 3 the remembered card is the third in the pile.

Using X as the number of letters in the spelling of the first word.

For step 3 you put down X cards so:

(a) The position of the remembered card is at $X-2$

(b) You put down $9-X$ onto the pile so the position of the remembered card is $(9-X) + (X-2) = 7$

For step 5 the remembered card moves to position 5

For step 7 if there are Y letters in the spelling of the word then the position of the remembered card is now $(9-Y) + (Y-4) = 5$

So the remembered card is now five down from the top of the pile.

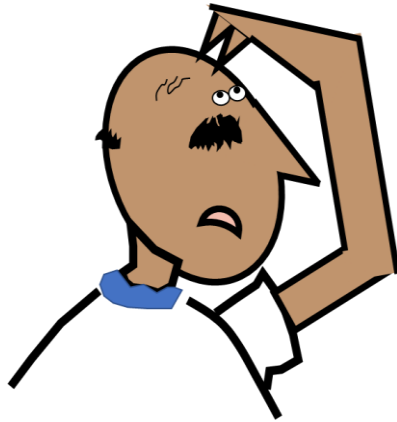
For step 9 there are five letters in the word "Magic"

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Please go to the next lesson.

Sum Christmas



I am always right 98% of the time.

The 3% when I'm wrong is when I'm doing maths.