

How to Perform the Zeno “Thought Transference” Trick

Location: <https://smmcroberts.net/zeno/fivecard>

Effect

In Brief

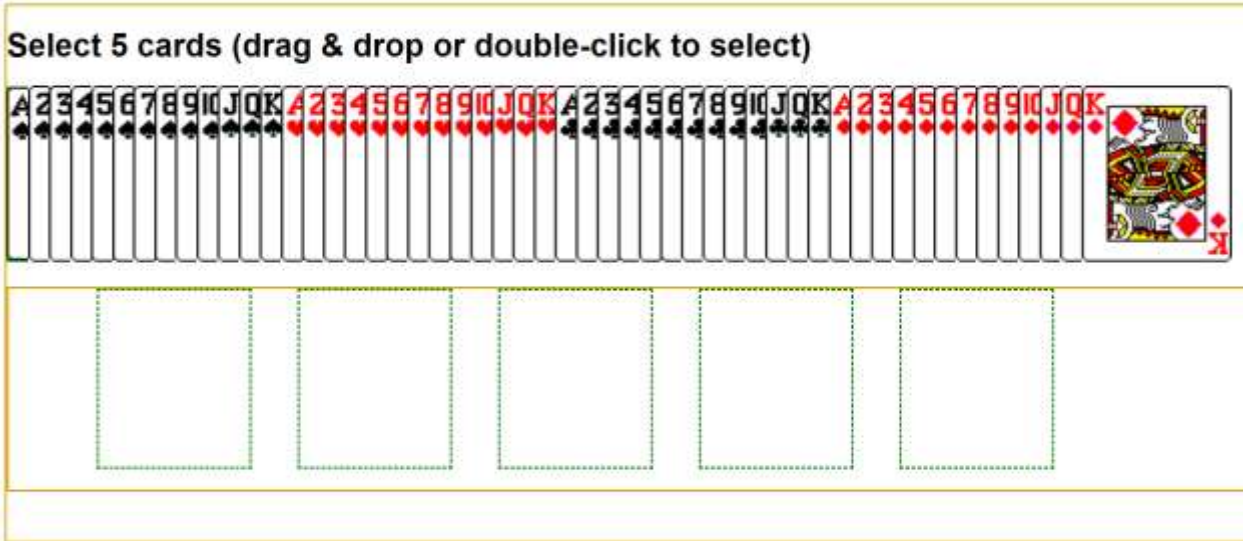
While the performer looks away, the spectator selects five cards from a face-up on-screen deck, removes the other cards, shuffles the five, then flips one of the five face-down. The performer then looks at the screen and gives the name of the face-down card.

In Detail (with patter)

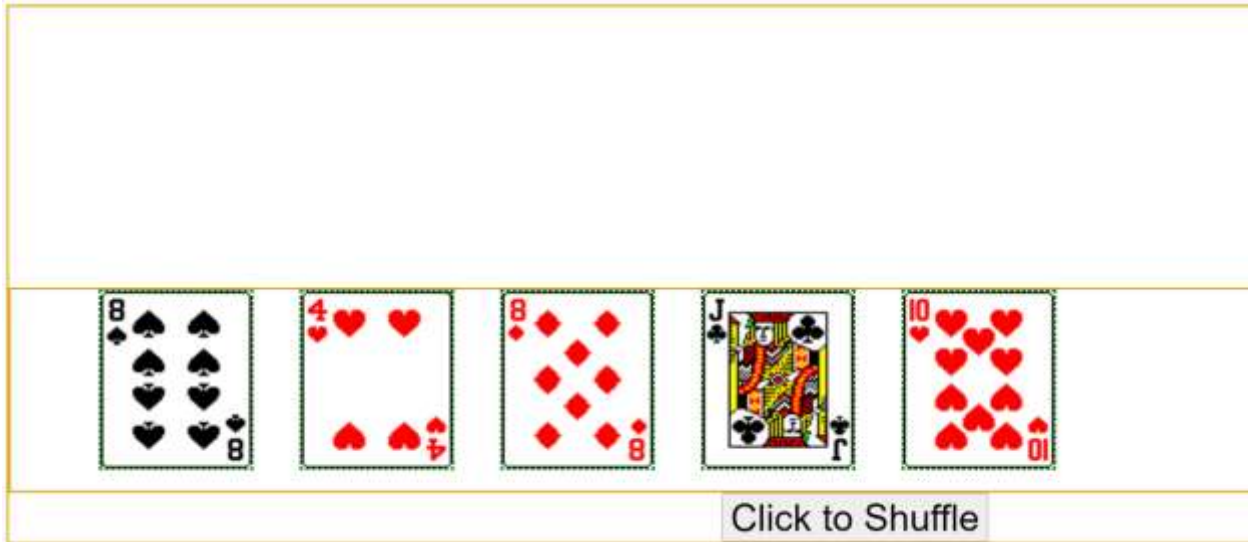
Tell the spectator that not only can Zeno read minds; he can also transfer his thoughts to another person. But that person has to have been trained by him.

You have been training for some time, and would like to try an experiment. At this point, if Zeno sends you four pre-arranged thoughts – sort of as a warm-up to “get in synch,” you can usually receive a new fifth thought from him.

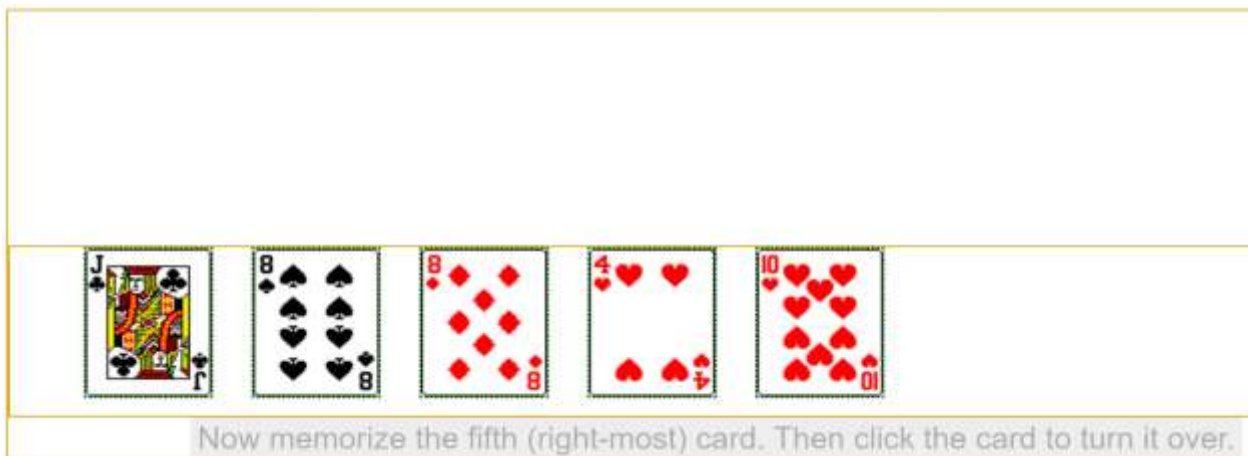
This time you’re going to let the spectator control the computer, to pre-arrange the thoughts with Zeno, while you look away and/or shut your eyes. You ask the spectator to select any five cards on the screen, from a face-up deck of 52 cards:



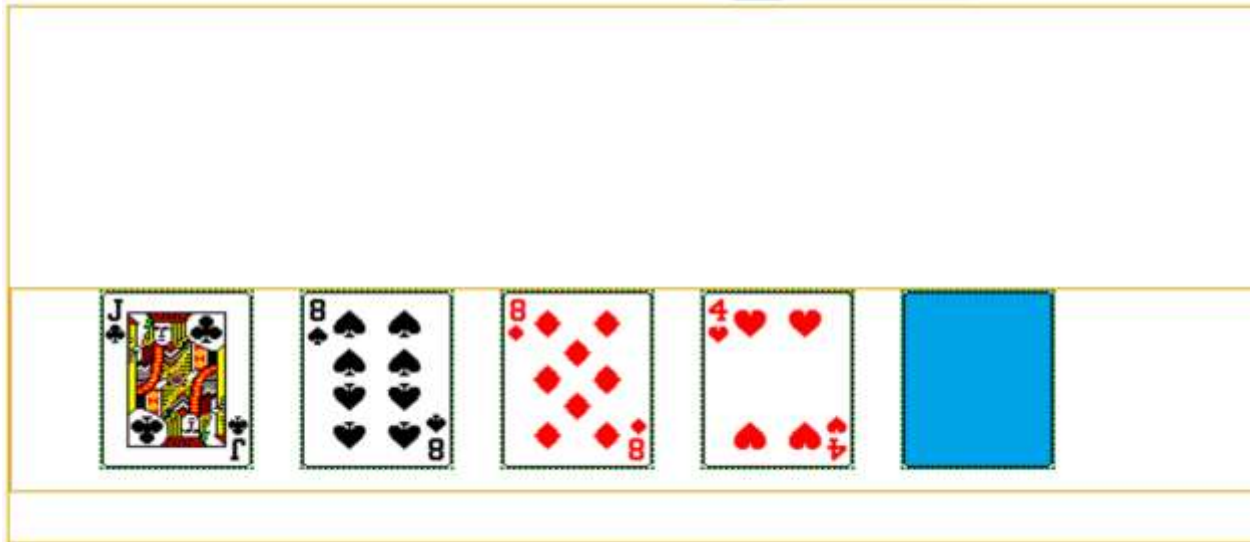
You tell the spectator that after selecting the cards, a “Shuffle” button will appear. They need to click on that button:



After the shuffling is completed, they need to follow the instruction that will appear: to memorize the fifth-card, and then click on it to cause it to turn over:



This will leave the screen looking like the following (with different cards, of course). At this point you come back into the picture (with eyes open!)

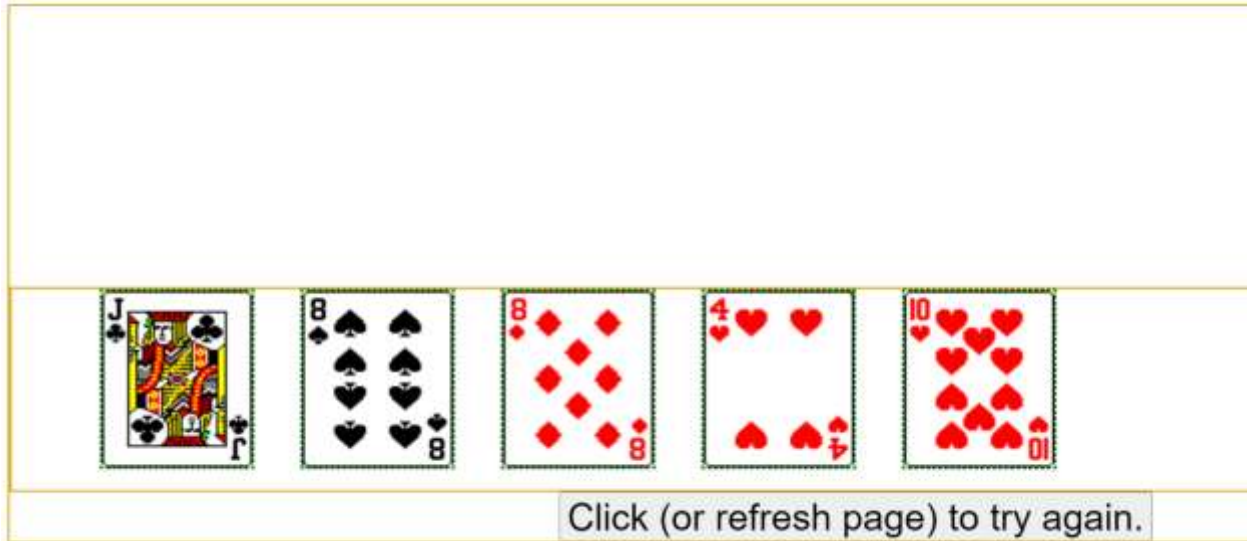


You stare at the screen, and say: “Zeno is sending me thoughts now... Yes, I can see how he is picturing the Jack of Clubs in his mind... and now the 8 of Spades... The Diamonds are a very bright red... and yes, there are 1-2-3-4-5-6-7-8 of them... and yes, now I actually see the number “8” in his mind... And, okay, there’s the Four of Hearts, clear as day.

“Now I need to really concentrate on the face-down card... I’m seeing a color. I think it’s – yes, it’s red. Not as bright as those diamonds I saw earlier, though. I see now: it’s Hearts. And there are 1-2-3-4-5 Hearts – wait, there are more... 1-2-3... oh, it’s another group of five. That’s 10 Hearts in all.”

After having concentrated so hard on the screen, with fingers at your temples, struggling for so long, you now turn to the spectator and ask, excitedly, “Was your card the Ten of Hearts? Are you kidding me? Click on the card again to turn it over, I need to see for myself!”

When the spectator clicks the fifth card, it turns over, and a new button appears, offering to try again:

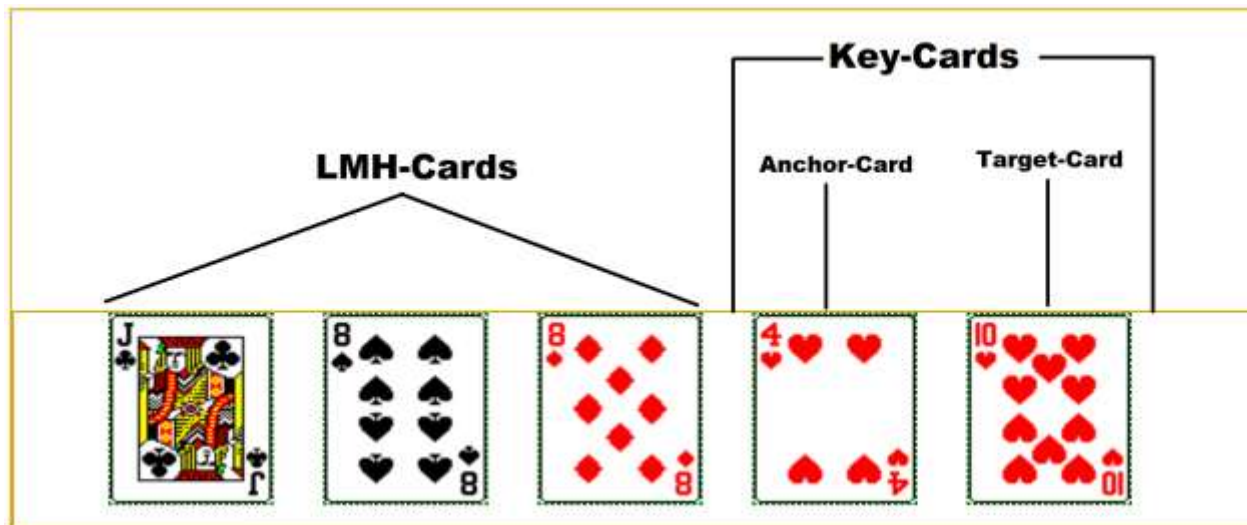


It makes a difference whether you click the button or refresh the page. We'll cover this in the explanation section, which follows.

Explanation

As incredible as it may seem, any five playing-cards can be arranged in such a way that four of the cards will give enough information to identify the fifth card. So, in this trick, the “secret” is right in front of the spectator’s eyes (if they only knew the code)!

The shuffling starts out randomly, but ends up with the cards arranged according to the code.



The Key-Cards

On the first performance, the Anchor-card will be in the fourth position, right next to the face-down “Target” card.

The Anchor-card will always be the same suit as the Target-card. So, in our example, looking at the 4-Hearts, we know that the Target-card is a Heart.

The Anchor-card also gives you the starting point for the value of the Target-card. In our example, we know that the Target-card will be some value greater than 4.

The LMH-Cards

The LMH cards are the other three cards. Together, they tell you whether to add 1, 2, 3, 4, 5, or 6 to the Anchor-card to arrive at the target-card’s value. They do this by the order in which their relative values (lowest, medium, highest) are arranged.

The value of the cards are: (from lowest to highest) Ace-King. Aces are valued at 1, Jacks at 11, Queens at 12, and Kings at 13.

When one or more LMH cards have the same value, we sub-order them by suit, in alphabetic order. Those values are: (from lowest to highest) Clubs, Diamonds, Hearts, Spades. In our example, the 8-spades is greater than the 8-diamonds.

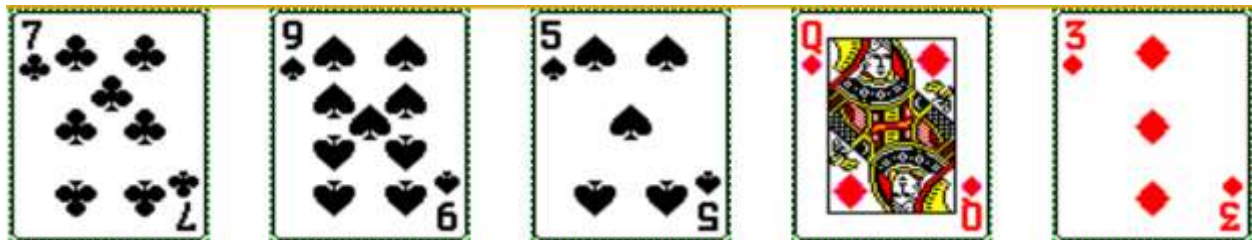
1 st LMH Card	2 nd /3 rd LMH Card	Add to Anchor-card Value
Lowest	Medium/Highest	1
	Highest/Medium	2
Medium	Lowest/Highest	3
	Highest/Lowest	4
Highest	Lowest/Medium	5
	Medium/Lowest	6

Explanation of the Chart

- If the first card is the *Lowest* card of the LMH cards, then you will add either 1 or 2 (the *lowest* numbers). If the 2nd LMH card is *smaller* than the 3rd LMH card, then you will add the *smaller* value (1), else you will add the larger value (2).
- If the first card is the *Medium* card of the LMH cards, then you will add either 3 or 4 (the *medium* numbers). If the 2nd LMH card is *smaller* than the 3rd LMH card, then you will add the *smaller* value (3), else you will add the larger value (4).
- If the first card is the *Highest* card of the LMH cards, then you will add either 5 or 6 (the *highest* numbers). If the 2nd LMH card is *smaller* than the 3rd LMH card, then you will add the *smaller* value (5), else you will add the larger value (6).

In our example, we have LMH-cards of: Jack-Spades, 8-Spades, 8-Diamonds. It's obvious that the first card is the Highest of the three, so we know that we will be adding either 5 or 6 to the Anchor-card. Looking at the next two cards, we see that they are both 8's. So, we have to decide which is the greater card by looking at their suits. Spades starts with "S," and that comes after "D" for Diamonds. This means that the *greater* cards comes first, so we add the *greater* of (5,6) to the Anchor-Card. That will give us the value of the Target-card: (4+6)=10 of Hearts.

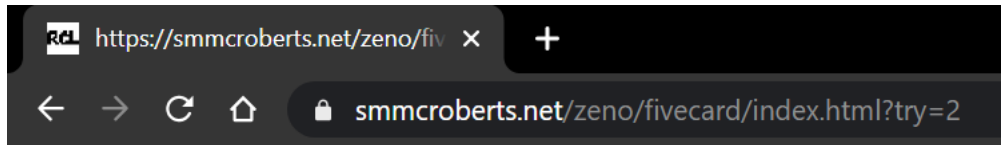
If your addition takes you beyond 13, then you loop around from King to Ace. So, if your anchor-card was the Queen of Diamonds, and your LMH cards were: /Medium/Highest/Lowest, you would add 4 to the Queen. You would count the four (perhaps *surreptitiously* on your fingers) as: "King, Ace, Two, Three," to arrive at the target-card of the Three of Diamonds.



Performing a 2nd or 3rd time

After the “reveal,” if you click the button to “try again,” it will use position 2 for the anchor-card (instead of position 4). The LMH-cards will then be in positions 1,3,4. [The Target position is *always* 5.]

If you click that button after the *second* go-round it will use position 3 for the anchor-card. In other words, the anchor position will match the number of “tries” (i.e., performances of the trick).



If you forget, take a look at the url. If it ends with “?try=2,” then the anchor-position is 2. If it ends with “?try=3,” then the anchor-position is 3. If it has no such ending, then the default anchor- position of 4 will be used.

Once you have practiced sufficiently, you can maximize the browser window (F11) when you perform, to hide the url from the spectator. That way they won’t make the connection between the try-number and the anchor position.

After the 3rd performance, Zeno will say goodbye. This is because if you keep repeating the trick, people will eventually catch on.

Refreshing the page does not change the anchor position. So, you have the option to keep it simpler for you, the performer, but easier for the spectator to catch on if you repeat the trick. Also, there is no limit to the number of performances when you refresh the page instead of clicking on the “try-again” button.

Practicing

To practice, visit <https://smmcroberts.net/zeno/fivecard/practice.html>

This will randomly display 4 face-up cards and one face-down card in coded order. You can test yourself by figuring out the face-down card, then click the card to turn it over and see if you were correct. Refresh to try again (or click the button to try with a different anchor-card position).

You should practice as many times as it takes to get proficient before performing.

Acknowledgements

This trick was not invented by me. It was invented by mathematician Fitch Cheney, and then published in a booklet for magicians called *Math Miracles* by Wallace Lee. It is known as *Cheney’s 5-card trick*. It was taught to me by Prof. Arthur T. Benjamin, PhD, in his lecture series “*Math and Magic*,” published by *The Great Courses*.

However, I *did* create the online version, which allows you to perform the trick without the need of a trained assistant.

- Steve McRoberts, 2021