If you were interested in the maths…

The number of possible combinations can be worked out using factorials.

If we only have 1 card: A. There is only one way we can put it in order.

If we have two cards A and B, there are two different ways - AB or BA.

With three cards, A, B and C there are six different ways - ABC, ACB, BAC, BCA, CAB, CBA

So, for 1 card it is 1. For two cards it is 2x1=2. For three cards it is 3x2x1=6. As mathematicians we write 3x2x1 as 3! The ! sign is called a factorial.

So, 4 cards is 4! = 24 ways. 5 cards is 5! = 120 ways. 6 cards is 6! ways = 720 ways.

As you introduce more cards, it starts to get very big very quickly.

If there were 10 cards, 10! is 3,628,800. For 13 cards, 13! is 6,227,020,800.

The number of ways you can arrange 20 cards is 2,432,902,008,176,640,000. That's two and a half billion billion.

So our 52 cards in a pack?

The number of combinations is 52x51x50x49x48....x4x3x2x1 which is:

80,658,175,170,943,878,571,660,636, 856,403,766,975,289,505,440,
883,277,824,000,000,000,000

To put this in perspective, the dinosaurs died out 65,000,000 years ago, and the age of the earth is just 4,500,000,000 years. Now suppose everybody in the world was to arrange packs of cards at the rate of one per second, it would take 600,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000 years to get all the combinations! That's why you're VERY unlikely ever to shuffle a pack of cards the same way twice.