  

Pick up the pile to which the single card was added. Count through, separating the cards in that pile into side by side pairs saying each time you count off two, "Here's a pair." Yippee, there are four pairs of cards so the extra card has vanished! To prove this you separate the cards in the other pile in the same manner, pair by pair, but there is a single card left over, so the odd card must have jumped unseen across to the other pile!

$\sqrt{x}$

Well, it could be invisible transporting of a card by magical powers. But, of course, it isn't. This trick works because in reality your volunteer is holding four pairs of cards in their left hand (4 x 2 = 8) and three pairs and one odd card ((3x2) +1 = 7) in their right hand. You have fooled them with a bit of *linguistic legerdemain* – that's fancy talk.

The paired cards, four from the left and three from the right are then divided into two piles, forming two identical piles containing seven cards (an odd number). But because all the way through you've been stressing, "Here's a pair", your volunteer hasn't noticed. They assume both piles are even.

Yes, it's another mind slip to cover the simple maths. With two piles of seven cards, adding the last single card turns that pile into an eight. So when you count them off two by two they are a full set of four even pairs. The spectator wonders, "Where did that odd card go?" The pile where the extra single card wasn't added is still seven so it shows three pairs and one left over. That's the odd card that your spectator assumes (wrongly) must have flown from the other pile.

Once again, this trick shows how easy it is to be fooled if you can't do simple mathematics and believe everything you're told.