

GROUP 18 (REPORT)

We conducted an experiment where we made a new deck of 50 elements using the command `makenums -o -u -M49 50` and then counted the unbroken pairs. We then loaded the result into the deck using the `load` command and counted the random shuffles. Below are the values obtained :

Number of unbroken pairs Random Permutations (length of deck = 50):	Number of random shuffles to randomise deck (length of deck = 50):
2	200
1	191
1	171
0	148
1	142
Average = 1	Average = 150.4

The average number of unbroken pairs in random permutations generated was 1. When setting the number of unbroken pairs in a newly generated deck to 1, the average number of random shuffles was 150.4

By the above data, we can conclude that around 150.4 random overhand shuffles are necessary for the number of unbroken pairs to behave as it would for random permutations.