Find four of a kind through simulation in r

Asked today   Modified today   Viewed 25 times   Part of R Language Collective

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- There is something off about my function and I am not sure what it is.... any help would be greatly appreciated

```
#Create a deck of cards
suits <- c("Diamonds", "Clubs", "Hearts", "Spades")
numbers <- c("Ace", "Two", "Three", "Four", "Five", "Six", "Seven", "Eight", "Nine",
"Ten", "Jack", "Queen", "King")
deck <- expand.grid(number = numbers, Suit = suits)

#simulate four of a kind in a hand of 5 cards
sim_four <- function(deck){
    sim_four <- sample(deck, size = 5, replace = FALSE)
    any(table(sim_four) == 4)

}

mean(replicate(10000, sim_four(deck)))```
```

r   statistics   probability   Edit tags

Share Edit Follow Close Flag   edited 10 hours ago   asked 10 hours ago

Shingi
3   2

New contributor

Hi! Thank you for your response... In this instance, I am not trying to sample, I specifically want to run a simulation but I am struggling with setting it up! I hope that makes sense... – Shingi 9 hours ago

Replace `sim_four <- sample(deck, size = 5, replace = FALSE)` with `sim_four <- sample(deck$number, size = 5, replace = FALSE)` . – jblood94 9 hours ago

2 Answers

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Hard to know the exact output you want but I assume it's this

```
sim_four <- function(deck){
  sim_fourV <- deck[sample(nrow(deck), size = 5, replace = FALSE),]
  any(table(sim_fourV['number']) == 4)

}
```

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I would do something like that:

```r
sim_four <- function(deck){
  ind <- sample(1:52,size = 5,replace = F)
  sim_four <- deck[ind,]
  any(table(sim_four$number) == 4)
}
```

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you need to sample from the number of cards and then select the card based on the indices previously sampled. When you look for 4 equal cards (in the poker sense), you need to look for the numbers and not for the suits

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That is working, thank you! – Shingi 9 hours ago