

Consider the following programming problem:

Given an integer N , find the number of divisors of N that are divisible by 3.

Please provide a solution for this problem in the R language.

Vorschläge anzeigen ▾



R Solution to Count Divisors Divisible by 3

Understanding the problem:

- We need to find all divisors of a given number N .
- From these divisors, we need to count only those that are also divisible by 3.

R code:

Code-Snippet

```
count_divisible_by_3 <- function(N) {  
  divisors <- c()  
  for (i in 1:N) {  
    if (N %% i == 0) {  
      divisors <- c(divisors, i)  
    }  
  }  
  
  count <- sum(divisors %% 3 == 0)  
  return(count)  
}
```

Verwende den Code [mit Vorsicht](#).



Explanation:

1. **count_divisible_by_3 function:**
 - Takes an integer N as input.
2. **Finding all divisors:**
 - Iterates from 1 to N .
 - If i is a divisor of N , it's added to the `divisors` vector.
3. **Counting divisors divisible by 3:**
 - Uses the modulo operator (`%%`) to check if each divisor is divisible by 3.
 - The `sum` function counts the number of `TRUE` values (i.e., divisors divisible by 3).
4. **Returning the count:**
 - Returns the final count of divisors divisible by 3.

Example usage:

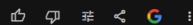
Code-Snippet

```
N <- 24  
result <- count_divisible_by_3(N)  
print(result) # Output: 4
```

Verwende den Code [mit Vorsicht](#).



This code will efficiently find and count the divisors of N that are divisible by 3.



Prompt hier eingeben



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