

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 ▾



Code-Snippet

```
count_divisors_divisible_by_3 <- function(N) {
  # Find all divisors of N
  divisors <- c(1:N)[N %% c(1:N) == 0]

  # Count divisors divisible by 3
  count <- sum(divisors %% 3 == 0)

  return(count)
}

# Example usage
N <- 24
result <- count_divisors_divisible_by_3(N)
print(result)
```

Verwende den Code [mit Vorsicht](#).



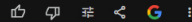
Explanation:

1. `count_divisors_divisible_by_3` function:

- Takes an integer N as input.
- Finds all divisors of N using vectorized operations:
 - Creates a sequence from 1 to N .
 - Checks if N is divisible by each number in the sequence using the modulo operator (`%%`).
 - Filters the divisors using logical indexing.
- Counts the number of divisors that are divisible by 3 using the modulo operator again and the `sum` function.
- Returns the count.

2. Example usage:

- Sets N to 24.
- Calls the function with N as input.
- Prints the result, which should be 2 (divisors 3 and 6).



Prompt hier eingeben



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