Counting Nums

Problem Definition:

Count the number of times the Digit 5 appears in a given number n.

Ex : for n = 153535, the digit 5 appears 3 times.

Steps to Solve:

Step 1: Initialize the number n.

Step 2: Initialize counter count = 0.

Step 3: loop while n > 0:

Calculate the remainder rem = n % 10.

if rem == 5, increament count

Update n = n / 10.

Step 4: Print the value of count.

Pseudocode:

```
Start
Initialize n
Initialize count = 0.
While n > 0
   rem = n % 10
   if rem == 5
      count = count + 1
   End if
   n = n / 10
End While
Print count
End.
```

Explanation:

this algorithm processes each digit of the number from right to left.

It checks if the current digit is 5 and updates the count accordingly.

the process continues until all digits have been processed.

Example Walk through:

For n = 153535

15 35 35 Y. 10 = 5 → count (5) = 1

15353 Y. 10 = 3 → count (5) = 1

1535 Y. 10 = 5 → count (5) = 2

153 Y. 10 = 3 → count (5) = 2

15 Y. 10 = 5 → count (5) = 3

1 Y. 10 = 1 → count (5) = 3