Pseudocode Exercise Questions

# 1. Check if a Number is Prime

Problem: Write a pseudocode to check whether a given number is prime.

Input: n

If n <= 1, Output "Not Prime"

For i from 2 to sqrt(n)

If n mod i == 0

Output "Not Prime"

Exit

Output "Prime"

# 2. For-Next Loop: Print Fibonacci Series up to N Terms

Problem: Write a pseudocode to print the Fibonacci series up to `n` terms using a `for` loop.  
Input: n

Let a = 0, b = 1

For i from 1 to n

Print a

Let temp = a + b

a = b

b = temp

End For

# 3. While Loop: Reverse a Number

Problem: Write a pseudocode to reverse a given number using a `while` loop.

Input: num

Let reverse = 0

While num > 0

Let remainder = num mod 10

reverse = reverse \* 10 + remainder

num = num // 10

End While

Output reverse

# 4. Arrays: Find the Median of an Array

Problem: Write a pseudocode to find the median of a given array.

Input: array

Sort array

Let length = number of elements in array

If length is odd

median = array[length // 2]

Else

median = (array[length // 2 - 1] + array[length // 2]) / 2

Output median

# 5. Matrices: Multiply Two 3x3 Matrices

Problem: Write a pseudocode to multiply two 3x3 matrices and display the result.

Input: matrix A, matrix B

Let result be a 3x3 matrix filled with 0s

For i from 0 to 2

For j from 0 to 2

For k from 0 to 2

result[i][j] = result[i][j] + A[i][k] \* B[k][j]

End For

End For

End For

Output result matrix