Exercise 01

Problem 1:

a. There is an error in line 1 where it says "while a > 0". This will result in a-b < 0, which means we won't get the expected remainder. To fix this, we should change "a > 0" to "a > b".

b. The error is in line 3. The statement "result <- False" should be inside the if loop; otherwise, the result will always be False. To correct it, we should let the statement “if” directly link to the line 4 statement “return”, and add a “else” between line 2 and line 3.

c. The error is in line 5. The algorithm seems correct, but the "return" statement is placed inside the for-loop, causing an error. As a result, the output will always be m instead of m^n. To resolve this, the "return" in line 5 should align with the "for" in line 3.

d. The error is in line 8. In the for-loop, when we use range(n), it actually means from 0 to n-1. Therefore, if we want to compute the sum of i^2, we should change range(n) to range(n+1) to obtain the correct answer.