Assignment 2, question 1

Write a function `factorial` to compute the factorial of the (positive integer) input argument `n` .

Assignment 2, question 2

Consider the linear-programming problem stated in simplified canonical form: `max cx: Ax <= b` .

Write a function `number_of_vertices_simplified` which takes as input two arguments `n` and `m` , corresponding, respectively, to the number of variables `x` and the number of constraints `Ax <= b` . Both `n` and `m` are positive integers.

The function should return an estimate of the number of vertices the problem contains, relying on the formula seen in equation (2.34) of the notes.

Assignment 2, question 3

Consider now the linear-programming problem stated in canonical (not simplified!) form: `max cx: Ax <= b, x >= 0` .

Write a function `number_of_vertices_full` which takes the same input as `number_of_vertices_simplified` and returns the same output. The function documentation must be completed to describe all parameters.

Hint: the `x >= 0` part of the problem contributes by adding `n` extra constraints!