Homework, week # 8, due to 9:00 am, May 27, 2016

(1) Design a Turing Machine to compute the function $f(n) = n - 3$ for every integer $n \geq 4$.

(2) Design a Turing Machine to compute the function $f(n, m) = (m + n, 2)$ for every integers $n, m \geq 0$.

(3) Design a Turing Machine to compute the function $f(n) = 3n$ for every integer $n \geq 1$.

(4) Design a Turing Machine to compute the function $f(n) = 5n$ for every integer $n \geq 1$.

(5) Design a Turing Machine to compute the function $f(n_1, \ldots, n_k) = n_1 + \cdots + n_k + k$ for every integers $n_1, \ldots, n_k, k \geq 1$.

(6) Let $k \geq 1$ be a fixed integer. Design a Turing Machine to compute the function $f(n_1, \ldots, n_k) = n_1 + \cdots + n_k + k$ for every integers $n_1, \ldots, n_k \geq 1$.