

## Exercise 2

### Task 1

Let  $x$  and  $y$  be natural numbers in binary representation. Decide in NC, whether  $x < y$ .

### Task 2

Let  $x$  and  $y$  be natural numbers in binary representation. Compute the subtraction  $x - y$  in NC, where  $x - y = 0$  if  $x < y$ .

### Task 3

Compute the number of paths between two nodes in a directed acyclic graph in NC.