**ADVANCED ALGORITHMS**

19/05/2017

1. Use the accelerated cascading technique for computing prefix sum.

Specify the machine model used and the required cost.

1. Give a sample run of the echo algorithm on the following graph. Node signed by the arrow is the initializer node.

1. Prove the following assertions:

* There cannot be a sorting network using only four gates that sorts all sequences of four numbers correctly.
* Every sequence of three elements is bitonic.