Exercise 6.1:
Given a SCP with the variables $x_1, \ldots, x_n$ linearly ordered by $\prec$ and the corresponding variable domains $D_1, \ldots, D_n$ non-empty, show the following (cf. Slide VII/8):

a) The number of nodes in the complete labeling tree associated with $\prec$ is

$$1 + \Sigma_{i=1}^{n} (\Pi_{j=1}^{i} |D_j|).$$

b) The complete labeling tree has the least number of nodes if the variables are ordered by their domain sizes in increasing order.

Exercise 6.2:
Consider the following CSP $C$ together with the ordering $x \prec y \prec z$:

$$\langle x \neq y, y > z, x < z; x \in \{1, 2, 3\}, y \in \{2, 3, 4\}, z \in \{1, 2, 3, 4\} \rangle$$

Give a prop labeling tree associated with $C$ (cf. Slide VII/13-14) for each of the two constraint propagation methods Forward Checking and MAC (Full Look Ahead).