Hierarchical Matrices

Summer semester 2013
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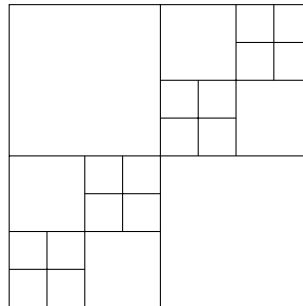
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Exercise Sheet 3.   Due date: **Tuesday**, 14.05.
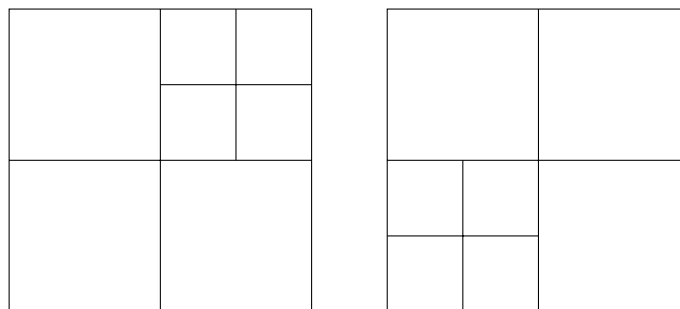

Exercise 1. (Product Tree)

Let $I = J = K$.

   a) Let the block cluster trees $T_{I \times J} = T_{J \times K}$ be represented by its leaves:

   Give a representation of the product tree T_{IJK}.

   b) Let the block cluster trees $T_{I \times J}$ and $T_{J \times K}$ be given by the representations

   Give a representation of the product tree T_{IJK} and give the sets $U_j(t \times s)$ defined
   in the lecture for $\ell = 0, 1, 2$ and $t \times s \in \mathcal{L}(T_{IJK})$.