Exercises solved at the recitation on 6. 11. 2007

• Find a family of \( \binom{k+s-2}{s} \) \( s \)-element sets without a \( k \)-sunflower.
• Find a family of \( (k-1)s \) \( s \)-element sets without a \( k \)-sunflower.
• Let \( F \) be a family of subsets of \([n]\) such that each two sets in \( F \) intersect. Show that \( |F| \leq 2^{n-1} \). Show that this estimate is best possible.
• Let \( k \geq 2 \). Show that a graph \( G = (V, E) \) with \( |E| \geq (k-1)|V| \) contains every tree with \( k \) edges as a subgraph.