

1. Let (V, \mathcal{H}) be a hypergraph such that $|V| = n \geq 3$, $|\mathcal{H}| = 2^{n-1}$. Show that if any three hyperedge has a common vertex then the intersection of all hyperedges is not empty. Hint: consider A , B and the complement of $A \cap B$.

2. Find all winner polyominoes in the weak polyominoe achievement game on a triangular grid. Hint: find a proof sequence for all maximal winners and a paving for all minimal losers