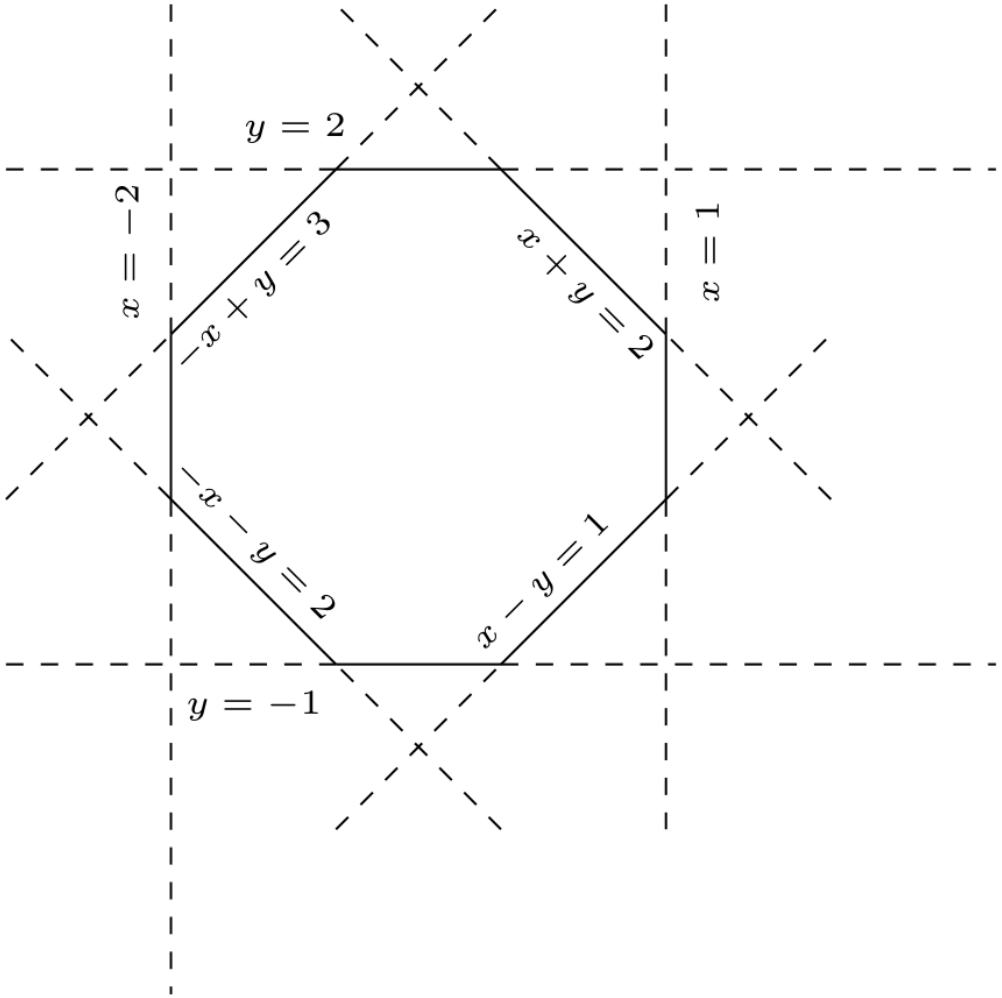
Octagons

- Let L be the set of Octagonal inequalities between n variables, then an octagon is conjunction of all the inequalities in set L



Encoding of Octagons

- Each octagonal inequality can be encoded as an element of a matrix m
- Each variable v_i is unfolded into $v'_{2i} = v_i^+$ and $v'_{2i+1} = v_i^-$
- $m_{i,j} = c$ represents $v'_j - v'_i \leq c$
- $v_i + v_j \leq c$ can be represented as: $v_j^+ - v_i^- \leq c$ and $v_i^+ - v_j^- \leq c$