

Problems, day 2:

- 1) Find equality conditions for the Edelman-Hibi-Stanley inequality
- 2) Find equality conditions for the Björner-Wachs inequality (Hint: forests)
- 3) Prove that the order polynomial $\Omega(P, t) \geq e(P) t^n/n!$ for all integer $t > 0$
- 4) Prove that the following inequality holds for sufficiently large t :

$$\Omega(P, t)/t^n \geq \Omega(P, t+1)/(t+1)^n$$