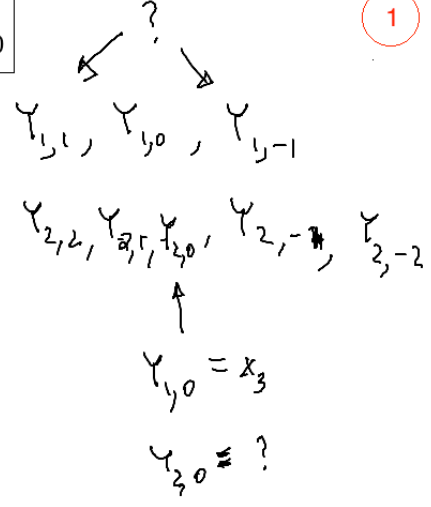


③, ⑤

④:  $Y_{m,k} = ?$

$m=1, 2$



David:

$$A_m = \left\{ u \bar{u}^q x_3^r \mid p+q+r=m \right\}$$

$m=1$ :  $u, \bar{u}, x_3$  de pesos  $1, 0, -1$ .  
 $Y_{1,1}, Y_{1,0}, Y_{1,-1}$

$m=2$ :  $u^2, \bar{u}^2, (x_3)^2, u\bar{u}, ux_3, \bar{u}x_3$

$\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ H_2 & H_2 & SO_2\text{-inv} & H_2 & H_2 \end{matrix}$

$A_2 \approx \mathbb{C}^6$   
 $\Delta: A_2 \rightarrow A_0$   
 $\mathbb{C}^6 \rightarrow \mathbb{C}$

pesos:  $2, -2, 0, 1, -1$

peso 0:  $u\bar{u} - 2x_3^2$

$p = \sum w_i p_i$   
 $p_i \in A_2$   
 $\Delta p = \sum c_i w_i = 0$

prob 7:

$P_m(t) = Y_{m,0}(*,*,t) = [(t^2-1)^m]^{(m)} \pmod{\text{const.}}$

prop. de  $P_m(t)$ : ①  $\langle p(t), q(t) \rangle := \int_{-1}^1 \overline{p(t)} q(t) dt$   
 ②

$\mathcal{P}_m \subset \mathbb{C}[t]$ ,  $p(t) = c_0 + c_1 t + \dots + c_m t^m \in \mathcal{P}_m$   
 pol. de grado  $\leq m$   
 $\mathcal{P}_0 \subset \mathcal{P}_1 \subset \mathcal{P}_2 \subset \dots \subset \mathcal{P}_m$   
 $\mathcal{P}_0 = 1, \mathcal{P}_1 = t$