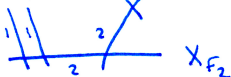
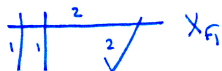
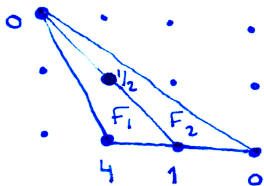


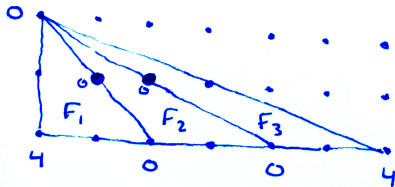
Last week : regular models

$$y^2 = x^3 + px^2 + p^4x$$



$$H^1 \cong X_2 \otimes Sp_2 \quad (p \neq 2)$$

$$y^2 = px^6 + x^4 + x^2 + p^4 \quad (p \neq 2)$$

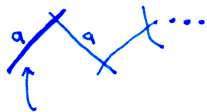


$$H^1 \cong Sp_2 \oplus Sp_2$$

Questions

- Is the model minimal with normal crossings?
- Arbitrary curves? [\Rightarrow canonical]
- Basis of $\omega_{\mathbb{C}/\mathbb{Q}_p}$?
- Conceptual explanation?
- Liu for $g=2, p=2$?
- Étale cohomology in the wild case?
- Tamagawa group and Tamagawa numbers?
- Higher-dimensional varieties?

Minimal with normal crossings?



"removable"

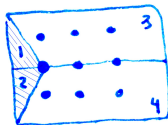
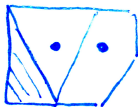


"contractible"

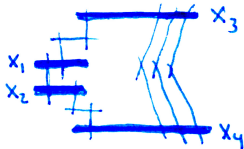


cannot blow down

correspond to:

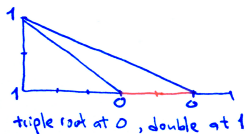


↑ faces that do not touch interior integer points

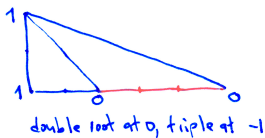


For general curves, need glueing

$$py^2 = x^3(x-1)^2 + p$$



$$py^2 = (x+1)^3 x^2 + p$$



→ glue
(or apply
 $x \rightarrow \frac{1}{x+1}, y \rightarrow \frac{y}{(x+1)^3}$)

