

EXAMPLE 3:

$$y^2 = x^{11} - t^3 = f(x)$$

$$\Delta_{\min} = 2 \binom{11}{2} \frac{3}{11} = 30$$

$$\text{div}(f) = +1 - 11/11$$

• H is not regular.

• Continued fraction expansion of $\frac{3}{11} = [3, 1, 2]$

$$11 = 3 \cdot 3 + 2$$

$$3 = 1 \cdot 2 + 1$$

$$2 = 2 \cdot 1$$

$$x^{11} - t^3 = x^9 \left(x^2 - \left(\frac{t}{x^3} \right)^3 \right)$$

$$= x^9 \left(\frac{t}{x^3} \right)^2 \left(\left(\frac{x^4}{t} \right)^2 - \frac{t}{x^3} \right)$$

$$= x^9 \left(\frac{t}{x^3} \right)^2 \left(\frac{x^4}{t} \right) \left(\frac{x^4}{t} - \frac{t^2}{x^7} \right)$$

$$v(t)=2, v(f)=6$$

$$v(t)=1, v(f)=3$$

$$v(t)=3, v(f)=9$$

$$v(t)=10, v(f)=30$$

$$v(t)=7, v(f)=21$$

$$v(t)=18, v(f)=54$$

$$v(t)=11, v(f)=33$$

$$v(t)=15, v(f)=44$$

$$v(t)=4, v(f)=11$$

$$v(t)=1, v(f)=0$$

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$$v(t)=4, v(f)=11$$

$$v(t)=1, v(f)=0$$

End of steps 1 & 2



End of step 3

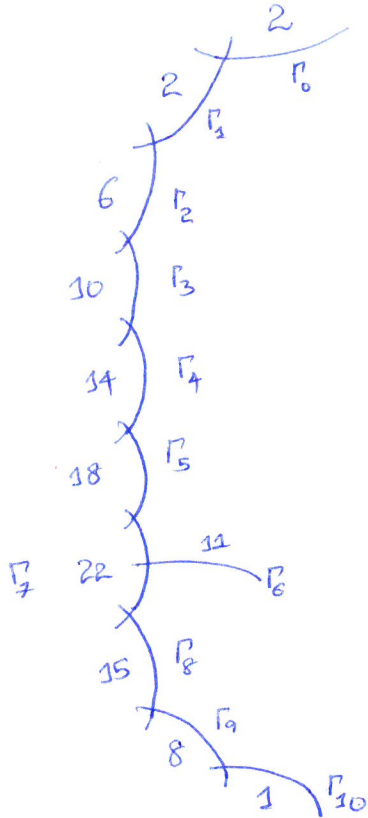
End of steps 4 & 5

$$y_s = y'_s$$

Sequence of multiplicities of the singular point on the strict transform of H =

$$\{ \underbrace{3, 3, 3}_3, \underbrace{2}_1, \underbrace{1, 1}_2 \}$$

$$\mathcal{X}_S = \mathcal{X}'_S$$



$$\sum_{i < j} P_i \cdot P_j = 10$$

$$a_i = (1 - m_{P_i}) \chi(P_i) + \sum_{j \neq i} (m_{P_j} - 1) P_i \cdot P_j$$

$$a_0 = -2 + 1 = -1$$

$$a_1 = -2 + 1 + 5 = 4$$

$$a_2 = a_3 = a_4 = a_5 = a_8 = a_9 = 0$$

$$a_6 = -20 + 23 = 3$$

$$a_7 = -42 + 17 + 10 + 14 = -1$$

$$a_{10} = 7$$

$$\sum a_i = 10$$

$$- \text{Art}(\mathcal{X}'_S) = 20 < \Delta_{\min} = 30.$$