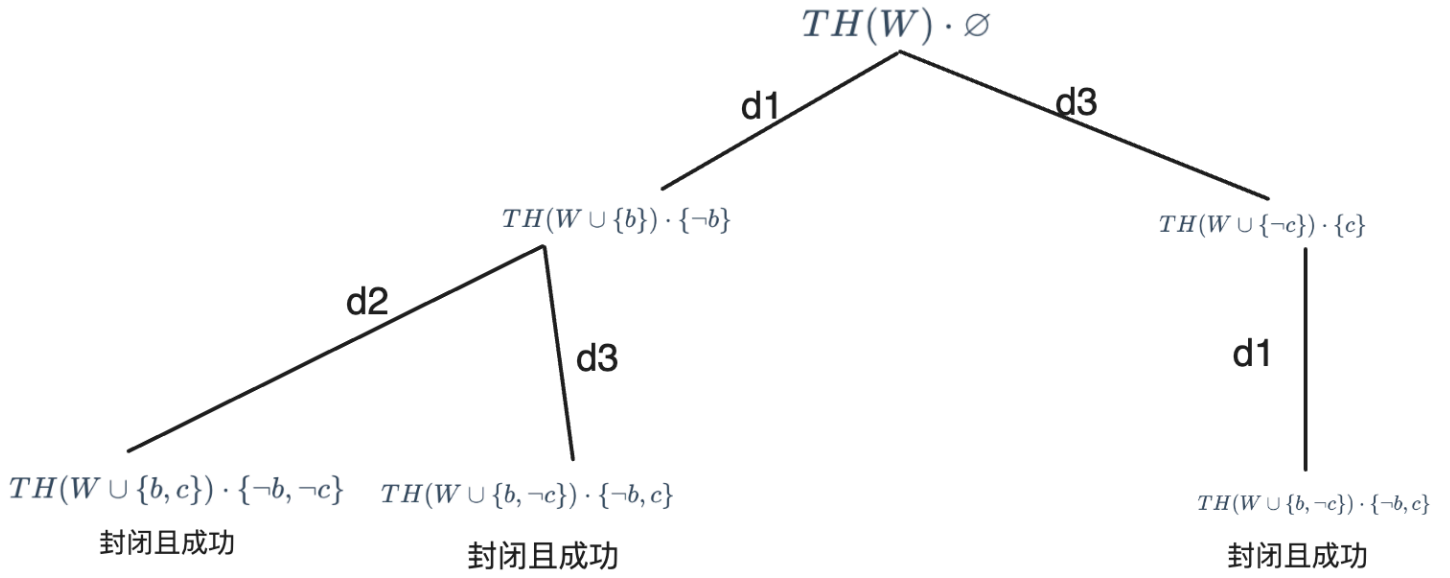


1.



$$2. \mathcal{L}(\Pi_2) = \{F, G\} \cup \{f\} \cup \{a\}$$

$$HU_{\Pi_2} = \{a, f(a), ff(a), \dots\}$$

$$HB_{\Pi_2} = \{F(a), G(a), F(f(a)), G(f(a)), F(f(f(a))), G(f(f(a))), \dots\}$$

$$M_{\Pi_2} = \emptyset$$