

$$f_{\text{ORIG}}(c, b, a) = \overline{b} \cdot a + c \cdot (b + \overline{a})$$

$$f_{\text{(N)AND}}(c, b, a) = \overline{b + \overline{a} + \overline{c} + b + \overline{a}}$$

$$f_{\text{(N)OR}}(c, b, a) = \overline{\overline{b \cdot a} \cdot \overline{c \cdot b \cdot a}}$$