$$P(fila, columna, signo, turno)$$

fila = 3
columna = 3
signo = 3
turno = 2
P = 54
letras chr(256) – chr(310)
tseitin regla Edgar chr(400) – chr(899)
tseitin regla Nicolas chr(900) – chr(1399)
tseitin regla Juan Luis chr(1400) – chr(1899)
β codifica que no hay cambio

$$\beta(x, y, z) \leftrightarrow (P(x, y, z, 0) \rightarrow P(x, y, z, 1))$$

$$\bigwedge \Big((P(x, y, E, 0) \wedge P(x, y, O, 1)) \leftrightarrow (\bigvee (\beta(x', y', z))) \Big)$$

Regla - Ganar cuando es posible

$$A \leftrightarrow \bigwedge (P(x, y, O, 0) \wedge P(x + 1, y, O, 0) \rightarrow P(x + 2, y, O, 1))$$

$$B \leftrightarrow \bigwedge (P(x, y, O, 0) \wedge P(x, y + 1, O, 0) \rightarrow P(x, y + 2, O, 1))$$

$$C \leftrightarrow \bigwedge (P(a, a, O, 0) \wedge P(a + 1, a + 1, O, 0) \rightarrow P(a + 2, a + 2, O, 1))$$

$$D \leftrightarrow \bigwedge (P(x, y, O, 0) \wedge P(x - 1, y + 1, O, 0) \rightarrow P(x - 2, y + 2, O, 1)), x + y = 2$$

$$A \wedge B \wedge C \wedge D$$

Regla - No perder

$$E \leftrightarrow \left(\bigwedge_{c \in \text{COLUMNA}} \left(\bigwedge_{f \in \text{FILA}} \left(\bigwedge_{\alpha \in \text{FILA} - \{f\}} P(\alpha, c, O, 0) \right) \rightarrow P(f, c, X, 1) \right) \right)$$

$$F \leftrightarrow \left(\bigwedge_{f \in \text{FILA}} \left(\bigwedge_{c \in \text{COLUMNA}} \left(\bigwedge_{\alpha \in \text{COLUMNA} - \{c\}} P(f, \alpha, O, 0) \right) \rightarrow P(f, c, X, 1) \right) \right)$$

$$G \leftrightarrow \left(\bigwedge_{\alpha \in \text{COLUMNA}} \left(\bigwedge_{\beta \in \text{COLUMNA} - \{\alpha\}} P(\beta, \beta, O, 0) \right) \rightarrow P(\alpha, \alpha, X, 1) \right)$$

$$H \leftrightarrow \left(\bigwedge_{\alpha \in \text{COLUMNA}} \left(\bigwedge_{\beta \in \text{COLUMNA} - \{\alpha\}} P(\beta, 2 - \beta, O, 0) \right) \rightarrow P(\alpha, 2 - \alpha, X, 1) \right)$$

$$E \wedge F \wedge G \wedge H$$