

$$\begin{aligned}
f_1 &= x_{10} + x_9 + x_8 + x_8x_{10} + x_8x_9 + x_7x_8 + x_6 + x_6x_8 + x_5x_8 + x_5x_7 + x_4x_{11} + \\
& x_4x_{10} + x_4x_8 + x_4x_7 + x_4x_6 + x_3x_{11} + x_3x_{10} + x_3x_7 + x_3x_6 + x_2 + x_2x_{10} + x_2x_7 + \\
& x_2x_4 + x_2x_3 + x_1x_{10} + x_1x_8 + x_1x_7 + x_1x_6 + x_1x_4 + x_1x_2 \\
f_2 &= x_{11} + x_{10} + x_8x_{11} + x_7x_{10} + x_6x_9 + x_6x_7 + x_5x_9 + x_5x_6 + x_4x_{11} + x_4x_{10} + \\
& x_4x_9 + x_4x_6 + x_3x_{11} + x_3x_5 + x_2 + x_2x_{11} + x_2x_{10} + x_2x_9 + x_2x_6 + x_2x_5 + x_2x_4 + \\
& x_1 + x_1x_{11} + x_1x_9 + x_1x_8 + x_1x_7 + x_1x_5 + x_1x_2 \\
f_3 &= 1 + x_9 + x_9x_{10} + x_8x_{10} + x_7x_8 + x_6x_{11} + x_6x_{10} + x_5x_{10} + x_5x_9 + x_5x_8 + \\
& x_5x_7 + x_5x_6 + x_4x_{11} + x_4x_{10} + x_4x_9 + x_3 + x_3x_{10} + x_3x_9 + x_3x_7 + x_3x_6 + x_3x_5 + \\
& x_2 + x_2x_{11} + x_2x_8 + x_2x_7 + x_2x_6 + x_2x_5 + x_2x_4 + x_2x_3 + x_1x_{11} + x_1x_9 + x_1x_2 \\
f_4 &= x_9x_{11} + x_9x_{10} + x_7 + x_7x_{11} + x_6x_8 + x_5 + x_5x_{10} + x_5x_9 + x_4 + x_4x_{11} + \\
& x_4x_9 + x_4x_6 + x_3 + x_3x_{11} + x_3x_{10} + x_3x_8 + x_3x_7 + x_3x_6 + x_2x_9 + x_2x_8 + x_2x_7 + \\
& x_2x_5 + x_2x_4 + x_2x_3 + x_1 + x_1x_{10} + x_1x_9 + x_1x_8 + x_1x_6 + x_1x_3 \\
f_5 &= 1 + x_9 + x_8 + x_8x_{11} + x_7 + x_6x_9 + x_6x_8 + x_6x_7 + x_5 + x_5x_{11} + x_5x_{10} + \\
& x_5x_7 + x_5x_6 + x_4 + x_4x_{10} + x_4x_9 + x_4x_8 + x_4x_7 + x_4x_5 + x_3 + x_3x_{11} + x_3x_9 + \\
& x_3x_5 + x_2x_8 + x_2x_5 + x_1x_{11} + x_1x_{10} + x_1x_8 + x_1x_7 + x_1x_6 + x_1x_3 + x_1x_2 \\
f_6 &= 1 + x_{10}x_{11} + x_9x_{11} + x_7 + x_7x_8 + x_6x_{10} + x_6x_9 + x_6x_8 + x_6x_7 + x_5 + x_5x_{11} + \\
& x_5x_9 + x_5x_7 + x_4 + x_4x_{11} + x_4x_{10} + x_4x_9 + x_4x_7 + x_4x_6 + x_4x_5 + x_3x_9 + x_3x_4 + \\
& x_2 + x_2x_8 + x_2x_4 + x_2x_3 + x_1 + x_1x_{10} + x_1x_9 + x_1x_8 + x_1x_5 + x_1x_4 + x_1x_3 + x_1x_2 \\
f_7 &= x_{11} + x_{10} + x_{10}x_{11} + x_9 + x_8 + x_7 + x_7x_8 + x_6x_{10} + x_6x_9 + x_5x_{11} + x_5x_{10} + \\
& x_5x_9 + x_5x_8 + x_5x_7 + x_4x_{11} + x_4x_9 + x_4x_8 + x_4x_6 + x_4x_5 + x_3 + x_3x_9 + x_3x_6 + \\
& x_3x_5 + x_2 + x_2x_9 + x_2x_8 + x_2x_7 + x_2x_4 + x_1x_8 + x_1x_7 + x_1x_5 + x_1x_4 + x_1x_3 + x_1x_2 \\
f_8 &= 1 + x_8 + x_7 + x_7x_8 + x_6x_{10} + x_6x_7 + x_5x_{10} + x_4 + x_4x_9 + x_4x_8 + x_4x_6 + x_3 + \\
& x_3x_8 + x_3x_7 + x_3x_4 + x_2 + x_2x_7 + x_2x_6 + x_2x_5 + x_2x_4 + x_1x_{11} + x_1x_9 + x_1x_7 + x_1x_3
\end{aligned}$$