

We can apply the methods to compute the convex hull of the solution set of systems of poly. inequalities:

Ex.

$$x_1^2 x_2^6 x_3^5 - x_2^4 x_4^8 \leq 5$$

$$x_{11} - x_{15} \leq 5$$

$$x_5 = x_1 x_2$$

$$x_6 = x_2 x_3$$

$$x_7 = x_5 x_6 \quad (= x_1 x_2^2 x_3)$$

$$x_8 = x_7^2 \quad (= x_1^2 x_2^4 x_3^2)$$

$$x_9 = x_6^2 \quad (= x_2^2 x_3^2)$$

$$x_{10} = x_8 x_9 \quad (= x_1^2 x_2^6 x_3^4)$$

$$x_{11} = x_{10} \cdot x_3$$

$$x_{12} = x_4^2$$

$$x_{13} = x_2 x_{12} \quad (= x_2 x_4^2)$$

$$x_{14} = x_{13}^2 \quad (= x_2^2 x_4^4)$$

$$x_{15} = x_{14}^2$$