Tutorials for Cyber-Physical Systems - Hybrid Models
Exercise sheet 8

Exercise 1:
A 2-dimensional polyhedron P is defined by the following linear inequalities.

$$\begin{cases} -x & & & \leq & 0 \\ x & + & 2y & \leq & 6 \\ -x & - & y & \leq & -2 \\ x & - & y & \leq & 3 \\ & - & y & \leq & 0 \end{cases}$$

Please give the vertices of P.

Exercise 2:
Given a 2-dimensional rectangle R which is defined by the convex hull of the points $(0,0), (0,1), (1,1), (1,0)$. Please give the vertices of R and P (given in Exercise 1), and the linear inequalities which define it.