

*Stacking Rings* feasible space

$$\begin{aligned}
X_{P1,\text{red}} &\leq 1 \\
X_{P1,\text{yellow}} + X_{P2,\text{yellow}} &\leq 1 \\
X_{P1,\text{green}} + X_{P2,\text{green}} + X_{P3,\text{green}} &\leq 1 \\
X_{P1,\text{blue}} + X_{P2,\text{blue}} + X_{P3,\text{blue}} + X_{P4,\text{blue}} &\leq 1 \\
X_{P1,\text{purple}} + X_{P2,\text{purple}} + X_{P3,\text{purple}} + X_{P4,\text{purple}} + X_{P5,\text{purple}} &\leq 1
\end{aligned}$$

$$\begin{aligned}
X_{P1,\text{red}} + X_{P1,\text{yellow}} + X_{P1,\text{green}} + X_{P1,\text{blue}} + X_{P1,\text{purple}} + X_{P1,\text{empty}} &= 1 \\
+ X_{P2,\text{yellow}} + X_{P2,\text{green}} + X_{P2,\text{blue}} + X_{P2,\text{purple}} + X_{P2,\text{empty}} &= 1 \\
+ X_{P3,\text{green}} + X_{P3,\text{blue}} + X_{P3,\text{purple}} + X_{P3,\text{empty}} &= 1 \\
+ X_{P4,\text{blue}} + X_{P4,\text{purple}} + X_{P4,\text{empty}} &= 1 \\
+ X_{P5,\text{purple}} + X_{P5,\text{empty}} &= 1
\end{aligned}$$

$$\begin{aligned}
X_{P1,\text{yellow}} &\leq X_{P2,\text{yellow}} + X_{P2,\text{green}} + X_{P2,\text{blue}} + X_{P2,\text{purple}} \\
X_{P1,\text{green}} &\leq X_{P2,\text{yellow}} + X_{P2,\text{green}} + X_{P2,\text{blue}} + X_{P2,\text{purple}} \\
X_{P2,\text{green}} &\leq X_{P3,\text{green}} + X_{P3,\text{blue}} + X_{P3,\text{purple}} \\
X_{P1,\text{blue}} &\leq X_{P2,\text{yellow}} + X_{P2,\text{green}} + X_{P2,\text{blue}} + X_{P2,\text{purple}} \\
X_{P2,\text{blue}} &\leq X_{P3,\text{green}} + X_{P3,\text{blue}} + X_{P3,\text{purple}} \\
X_{P3,\text{blue}} &\leq X_{P4,\text{blue}} + X_{P4,\text{purple}} \\
X_{P1,\text{purple}} &\leq X_{P2,\text{yellow}} + X_{P2,\text{green}} + X_{P2,\text{blue}} + X_{P2,\text{purple}} \\
X_{P2,\text{purple}} &\leq X_{P3,\text{green}} + X_{P3,\text{blue}} + X_{P3,\text{purple}} \\
X_{P3,\text{purple}} &\leq X_{P4,\text{blue}} + X_{P4,\text{purple}} \\
X_{P4,\text{purple}} &\leq X_{P5,\text{purple}}
\end{aligned}$$

$$\begin{aligned}
X_{P1,\text{red}} + X_{P1,\text{yellow}} + X_{P1,\text{green}} + X_{P1,\text{blue}} + X_{P1,\text{purple}} + \\
X_{P2,\text{yellow}} + X_{P2,\text{green}} + X_{P2,\text{blue}} + X_{P2,\text{purple}} + \\
X_{P3,\text{green}} + X_{P3,\text{blue}} + X_{P3,\text{purple}} + \\
X_{P4,\text{blue}} + X_{P4,\text{purple}} + \\
X_{P5,\text{purple}} &\geq 1
\end{aligned}$$