Graph $G = (U \cup V, E)$, want maximum matching M (1)

$x_{i,j}$ true if $(i,j) \in M$ (2)

min $\sum_{(i,j)\in E} \bar{x}_{i,j}$

s.t. $\bar{x}_{i,j} + \bar{x}_{i,k} \geq 1$ for $(i,j),(i,k) \in E$

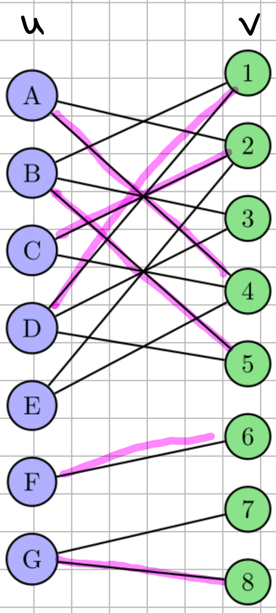
e.g.

$\bar{x}_{B,1} + \bar{x}_{B,3} \geq 1$ (1)

$\bar{x}_{B,1} + \bar{x}_{B,5} \geq 1$ (2)

$\bar{x}_{B,3} + \bar{x}_{B,5} \geq 1$ (3)

$\bar{x}_{G,7} + \bar{x}_{G,8}$ (4)



Rule	Annotation	Result		
Lit	$\bar{x}_{F,6}$	$\bar{x}_{F,6} \geq 0$	(5)	3
Add	(1) + (2)	$2\bar{x}_{B,1} + \bar{x}_{B,3} + \bar{x}_{B,5} \geq 2$	(6)	4
Add	(6) + (3)	$2\bar{x}_{B,1} + 2\bar{x}_{B,3} + 2\bar{x}_{B,5} \geq 3$	(7)	
Div	(7) / 2	$\bar{x}_{B,1} + \bar{x}_{B,3} + \bar{x}_{B,5} \geq 2$	(AMO-B)	5
	derive similar to AMO-B	$\bar{x}_{D,1} + \bar{x}_{D,3} + \bar{x}_{D,5} \geq 2$	(AMO-D)	
		$\bar{x}_{2,A} + \bar{x}_{2,C} + \bar{x}_{2,D} \geq 2$	(AMO-2)	
		$\bar{x}_{4,A} + \bar{x}_{4,C} + \bar{x}_{4,D} \geq 2$	(AMO-4)	
Dom	$\omega = \{x_{F,6} \mapsto 1\}$	$x_{F,6} \geq 1$		6
Red	$\omega = \{x_{G,7} \mapsto x_{G,8}, x_{G,8} \mapsto x_{G,7}\}$	$\bar{x}_{G,7} + x_{G,8} \geq 1$		7
ADD	(AMO-B) + (AMO-D) + (AMO-2) + (AMO-4) + (4) + (5)	$\sum_{(i,j)\in E} \bar{x}_{i,j} \geq 9$ (from 15)	(8)	8
Bound	Matching marked ● (sets 6 variables to true)	$\sum_{(i,j)\in E} x_{i,j} \geq 7$	(9)	9
Add	(8) + (9)	$0 \geq 1$		