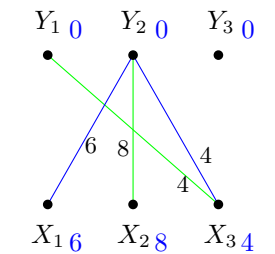
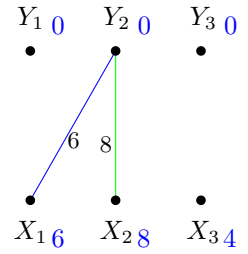


Original Graph

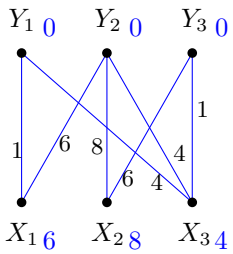


Eq Graph + Matching

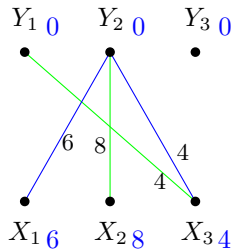


Alternating Tree
rooted at X_1

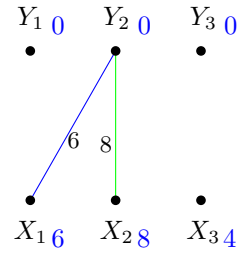
$S = \{X_1, X_2\}$
 which implies
 $T = \{Y_2\}$



Original Graph

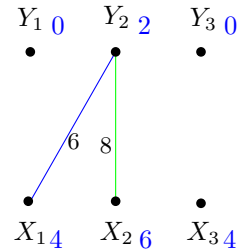


Eq Graph + Matching

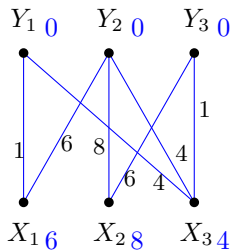


Alternating Tree
rooted at X_1

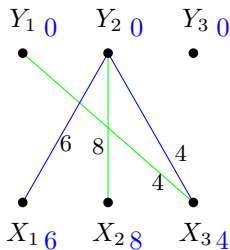
$S = \{X_1, X_2\}$
which implies
 $T = \{Y_2\}$



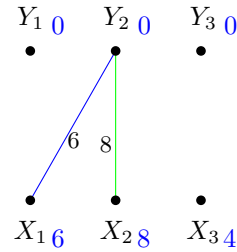
Label Update



Original Graph

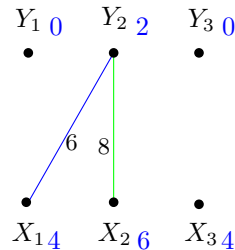


Eq Graph + Matching

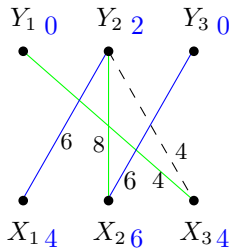


Alternating Tree
rooted at X_1

$S = \{X_1, X_2\}$
which implies
 $T = \{Y_2\}$



Label Update



New Eq Graph + Matching

Note that this update

- (a) Kept all matching edges in Eq graph
- (b) Added new edge (X_2, Y_3) to Eq graph
- (c) Removed edge $(X_3, Y_2) \in \bar{S} \times T$
from Eq graph