Pennant Race Problem

w = #A's wins (assuming A wins all remaining games)

w_i = #T_i's wins

$\{(T_i, T_j)\}$ = games remaining to be played

If $w_i > w$ then no hope for A. Done.

So assume $W_i \leq w$ for all i.

Can draw a flow graph with s pointing to each game, and each game pointing to the two participating teams, and the teams pointing to t..

Edges:

$(s, (T_i, T_j))$ with capacity 1

$((T_i, T_j), T_i), ((T_i, T_j), T_j)$ with capacity 1

(T_i, t) with capacity $w_i - w$.

If max flow size = # games to play, then A still has hope.

Runtime $O((\#games * 3 + \#teams) * (\#games + \#teams))$.