Some Tree Decompositions.

$T = t$

$W_t = V(G)$

$\forall v \; S_v = T$

For any G

width is $|V|-1$

T

$W_s = V(G) - x$

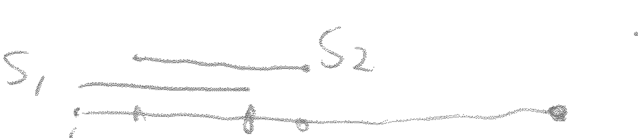
$W_t = V(G) - y$

$S_x = t, \; S_y = s$

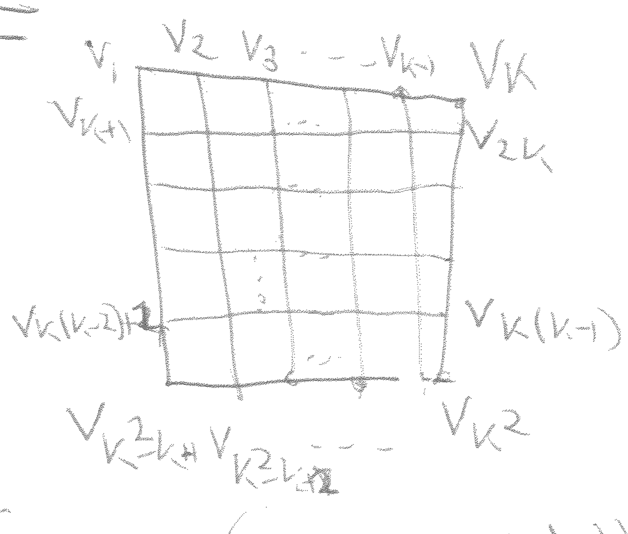
$\forall v \in V - x - y, \; S_v = T.$

For any non-clique G s.t. $x, y \in V(G)$, $\overline{xy} \notin E(G)$.

width $|V|-2$



T



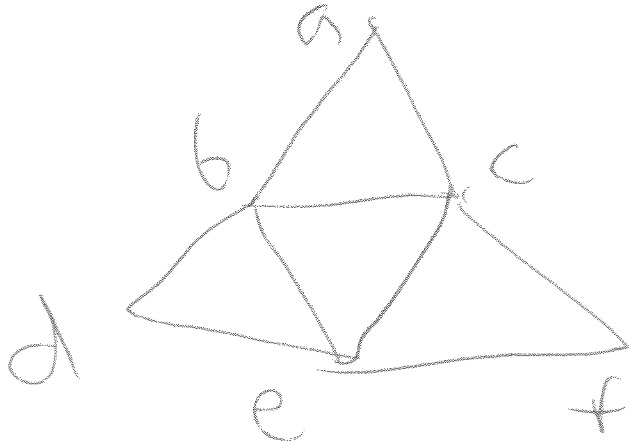
For $k+1 \leq i \leq k^2$

$W_{t_i} = \{v_{i-k}, \ldots, v_i\}$

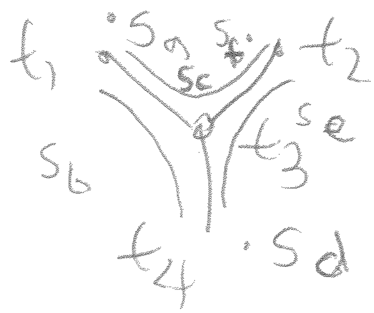
For $i \leq k$ $W_{t_i} = \{v_1, \ldots, v_i\}$.

$S_{v_i} = \{t_i, t_{i+1}, \ldots, t_{i+k}\}$.

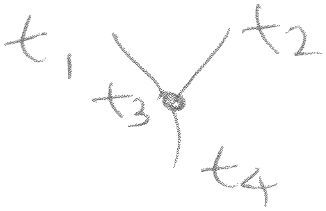
G width is k.



G



$T + \{s_v \mid v \in V\}$



T

$S_a = t_1$

$S_d = t_4$

$S_f = t_2$

$S_b = \{t_1, t_3, t_4\}$

$S_c = \{t_1, t_2, t_3\}$

$S_e = \{t_2, t_3, t_4\}$

$W_{t_1} = \{a, b, c\}$

$W_{t_2} = \{c, e, f\}$

$W_{t_3} = \{b, c, e\}$

$W_{t_4} = \{d, b, e\}$