Vertex Identification

G a graph, $v, w \in V(G)$

G/vw = graph G with v & w identified

G

G
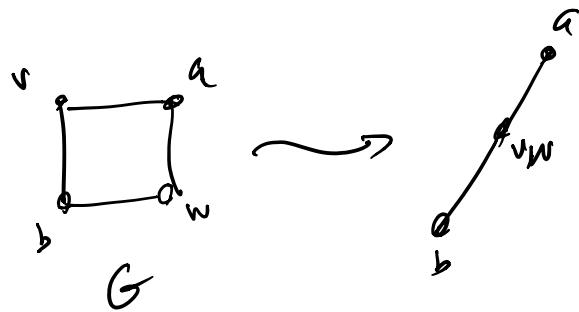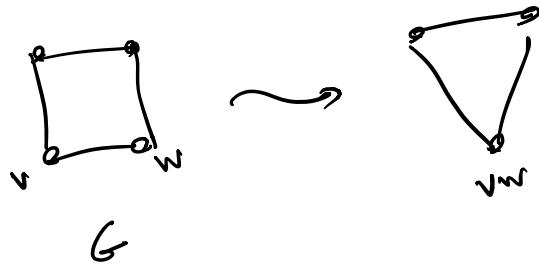
__Def__ G/vw graph w/ vertex set

$$V(G/vw) = \left(V(G) \setminus \{v, w\} \right) \cup \{vw\}$$

if $x, y \in V(G)$, $x, y \neq v$ or w

in G/vw x & y are adjacent $\iff$ they're adjacent in G

if $z \in V(G) \setminus \{v, w\}$

z adj to vw in G/vw $\iff$ z adj to v or w in G