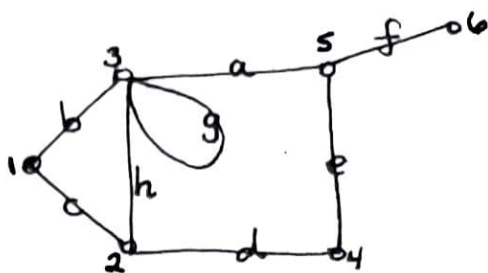


ACTIVE LEARNING on planar graph duality

① For this graph $G =$

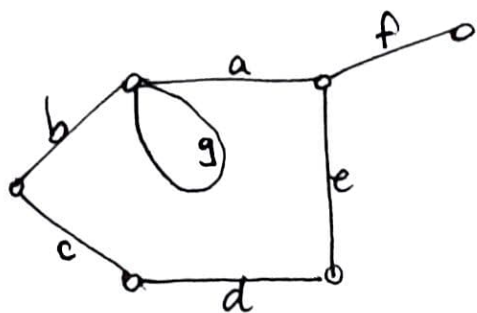


, draw G^*

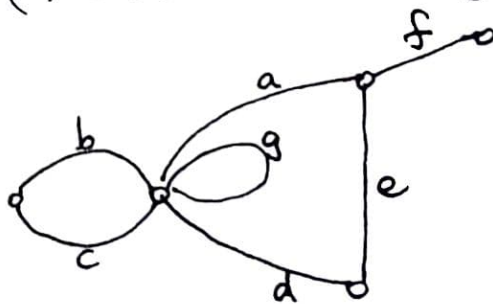
and then (on the side) draw $(G^*)^*$. How does $(G^*)^*$ relate to G ?

② Edge f is a cut-edge in G . What special feature does f^* have?
 Edge g is a loop in G . What special feature does g^* have?

③ Here are pictures of the deletion $G \setminus \{h\}$ and contraction $G / \{h\}$.
 Draw their duals $(G \setminus \{h\})^*$ and $(G / \{h\})^*$. How do they relate to G^* ?



$G \setminus \{h\}$



$G / \{h\}$