

Vocab/notation In a graph  $G$ ...

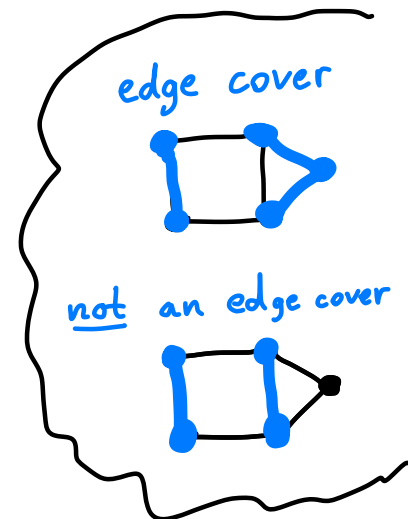
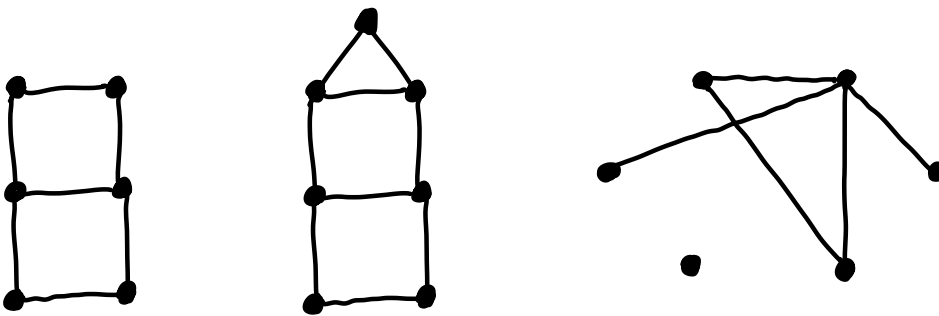
**Matching:** a set of edges with no shared vertices.

$$\alpha'(G) = \text{max. size of a matching in } G$$

**Perfect matching (or 1-factor):** a matching covering all vertices in  $G$ .

**Edge cover:** a set of edges that “covers” every vertex in  $G$ . (a set of edges  $F \subseteq E(G)$  where every vertex in  $G$  is contained in some edge in  $F$ )

$$\beta'(G) = \text{min. size of an edge cover in } G$$



Find  $\alpha'(G)$  and  $\beta'(G)$  for each of these graphs.