## **DEFINITIONS**

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Abstract.

**Independent Set:** If a and b are any two vertices in a subset S of graph G then S is a independent subset of G if there is no edge connecting a and b

Covering of G: if every edge of G is adjacent to at least one vertex of a subset K then K is called a covering of G

**Theorem:** A set  $S \subseteq V$  is a independent set of G if and only if V-S is a covering of G **Chromatic Number:** The chromatic number of a graph G is denoted by  $\mathbb{X}(G)$  and is equal the colors' quantity used in a minimum coloring.

**Extremal Number:**  $ex(n, H) = max\{e(G) : \text{graph } G \text{ with } n \text{ vertices and } H \subsetneq G\}$