

Localization Methods

Notation

- ① Let K be a property on graphs, $A(K, p)$ denote the set of graphs of order at most p that satisfy property K , and

$$f(K, p) := \max\{d(G) \mid G \in A(K, p)\},$$

where $d(G)$ is the diameter of G .

- ② For a graph G and a vertex u in G , let $G_i(u)$ denote the subgraph of G induced on the set

$$\{w \in G \mid \partial(u, w) \leq i\}.$$

Lemma

Let K be a property on graphs, and G be a graph of order p . Then the following are equivalent:

- 1 $G \in A(K, p)$;
- 2 $G_{f(L,p)}(u) \in A(k, p)$ for all vertices u in G .

(敘述怪怪的，需要 K 具單調性，或者誤解 $A(K, p)$ 的定義)