Assignment #6

This assignment digs into two networks representing two different villages in Korea. In the 1970s villagers were asked to report on their communication network and whether they have adopted family planning strategies which is included as an attribute.

Cohesion/Community

1. Components, Cliques, Cores

For both of the 2 datasets from Korea on family planning, use igraph to identify each of the following:

i. The # of isolates (hint: isolates(g))
ii. The size of the largest component
iii. The size of the largest bicomponent
iv. The size of the largest clique
v. k for the largest k-core

2. Extracting sub-graphs

For each of the Korea family planning data sets, provide a plot of the sub-graph representing only each village's largest bicomponent.

3. Communities

a. Between Louvain, Walktrap, and Newman-Girvan, which community detection algorithm seems to perform best over each villages' largest component?
b. Which algorithm seems to best show the relationship between adopting family planning practices
c. Provide 1 plot for the village where the association is strongest, and the 1 algorithm that best represents that relationship.