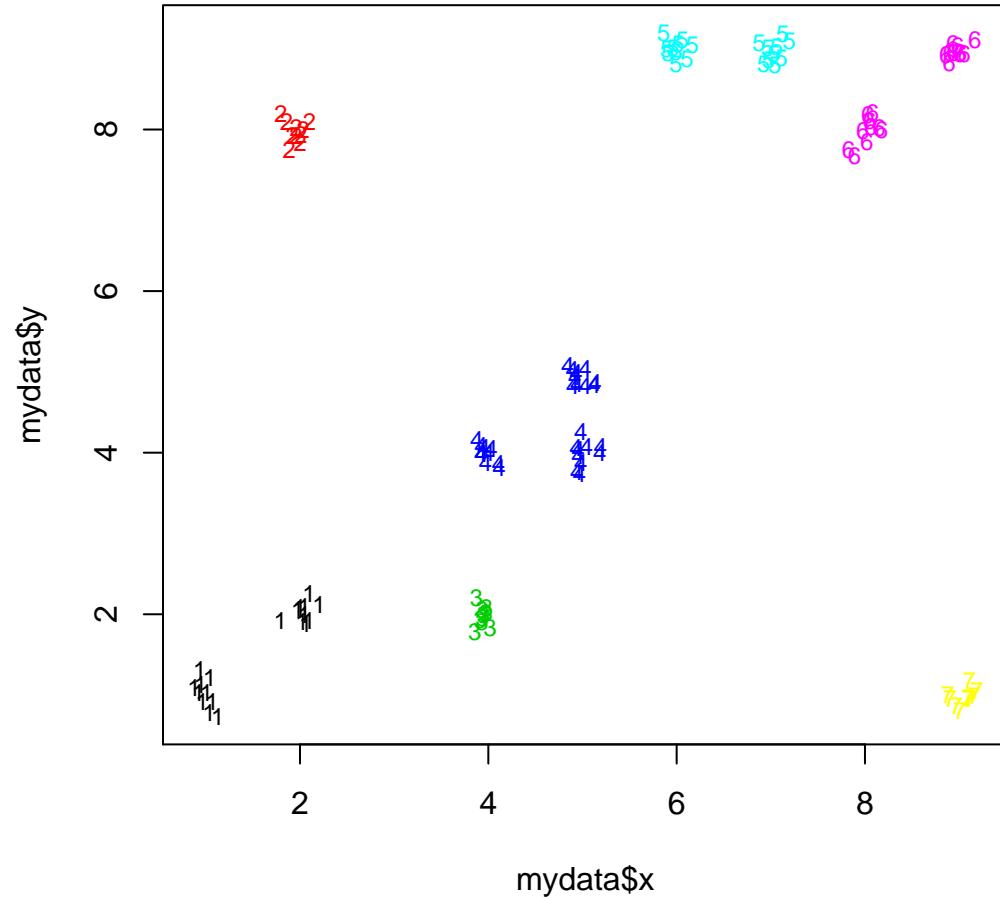
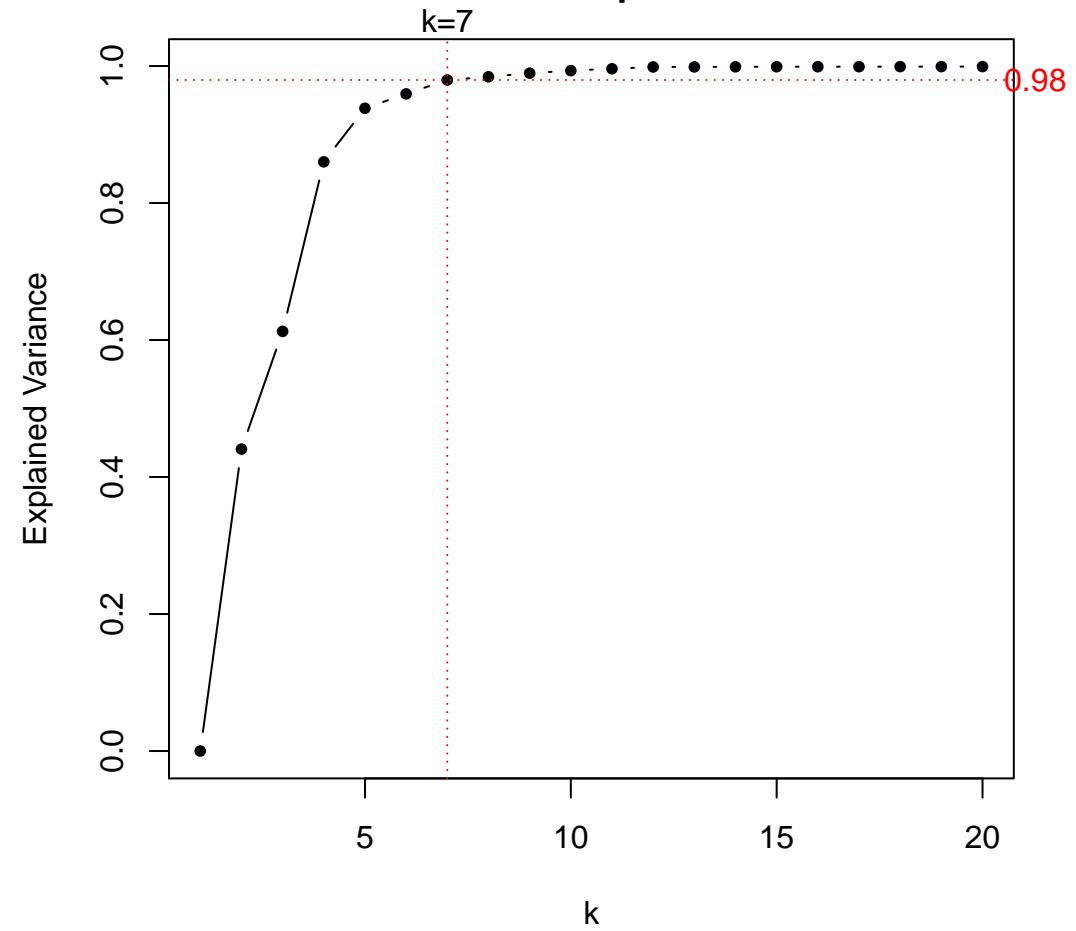


### Clusters of simulated data



### Elbow plot



A "good"  $k=7$  is detected when the EV is no less than 0.95 and the increment of EV is no more than 0.01 for a bigger  $k$ .