

4.2.6.5. Exercise 4.3

Q1: If $\{A B C D\}$ is a frequent itemset
list possible candidate rules

Solution ① $2^k - 2 = 2^4 - 2 = 16 - 2 = 14$ candidate.

Due to we exclude $\emptyset \rightarrow L$ $L \rightarrow \emptyset$

② One element LHS

$$A \rightarrow B C D$$

$$B \rightarrow A C D$$

$$C \rightarrow A B D$$

$$D \rightarrow A B C$$

③ Two element LHS

$$A B \rightarrow C D$$

$$A C \rightarrow B D$$

$$A D \rightarrow B C$$

$$B C \rightarrow A D$$

$$B D \rightarrow A C$$

$$C D \rightarrow A B$$

④ Three - element LHS

$$A B C \rightarrow D$$

$$A B D \rightarrow C$$

$$A C D \rightarrow B$$

$$B C D \rightarrow A$$

Q2: $BC \rightarrow AD$ isn't a strong rule

list rules can be pruned.

Solution: ① According to the 4.2.6.3
Confidence-Based Pruning

② $B \rightarrow ACD$

$C \rightarrow ABD$

will be pruned.