2.2. Pattern Discovery Basic Concepts: Frequent Patterns and Association Rules

In-Lecture Questions

Question

Tid	Items bought
10	Beer, Nuts, Diaper
20	Beer, Coffee, Diaper
30	Beer, Diaper, Eggs
40	Nuts, Eggs, Milk
50	Nuts, Coffee, Diaper, Eggs, Milk

Let X be the 1-itemset {Beer} and Y be the 1-itemset {Diaper}. What is the complete set of transactions from the table that contains the itemset X $\cup$ Y?

- ❑ {10, 20, 30, 50}
- ❑ {10, 20, 30}
- ❑ {}

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- ❏ {10, 20, 30}
- ❏ {}

Answer: {10, 20, 30}
Explanation: X $\cup$ Y = {Beer, Diaper}. We are looking for transactions that contain both Beer and Diaper, not the set of transactions that contains either Beer or Diaper.

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40	Beer, Nuts, Eggs, Milk
50	Nuts, Coffee, Diaper, Eggs, Milk

Given the transactions in the table, minsup = 50% and minconf = 50%, how many association rules are there?

- ❑ 0
- ❑ 2
- ❑ 4
- ❑ 5
- ❑ 6

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Given the transactions in the table, minsup = 50% and minconf = 50%, how many association rules are there?

❑ 0

❑ 2

❑ 4

❑ 5

❑ 6

Answer: 6
Explanation: The rules are: Beer → Nuts, Nuts → Beer, Beer → Diaper, Diaper → Beer, Nuts → Diaper, Diaper → Nuts