Question 13

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library(arules)

## Loading required package: Matrix

##   
## Attaching package: 'arules'

## The following objects are masked from 'package:base':  
##   
## abbreviate, write

data(Groceries)  
  
rules <- apriori(Groceries, parameter = list(support = 0.001, confidence = 0.5))

## Apriori  
##   
## Parameter specification:  
## confidence minval smax arem aval originalSupport maxtime support minlen  
## 0.5 0.1 1 none FALSE TRUE 5 0.001 1  
## maxlen target ext  
## 10 rules TRUE  
##   
## Algorithmic control:  
## filter tree heap memopt load sort verbose  
## 0.1 TRUE TRUE FALSE TRUE 2 TRUE  
##   
## Absolute minimum support count: 9   
##   
## set item appearances ...[0 item(s)] done [0.00s].  
## set transactions ...[169 item(s), 9835 transaction(s)] done [0.00s].  
## sorting and recoding items ... [157 item(s)] done [0.00s].  
## creating transaction tree ... done [0.00s].  
## checking subsets of size 1 2 3 4 5 6 done [0.01s].  
## writing ... [5668 rule(s)] done [0.00s].  
## creating S4 object ... done [0.00s].

rules <- rules[!is.redundant(rules)]  
  
pastryRules <- subset(rules, rhs %in% "pastry")  
  
inspect(pastryRules)

## lhs rhs support confidence coverage lift count  
## [1] {citrus fruit,   
## whole milk,   
## whipped/sour cream,   
## rolls/buns} => {pastry} 0.001016777 0.5 0.002033554 5.62 10