1. By looking at the summary table of data:
   1. There are 4339 transactions and 3665 items.
   2. The most frequent items are 22423(REGENCY CAKESTAND 3 TIER) purchased 881 times, 85123A(WHITE HANGING HEART T-LIGHT HOLDER) purchased 856 times, 47566(PARTY BUNTING) purchased 708 times, 84879(ASSORTED COLOUR BIRD ORNAMENT) purchased 678 times, 22720(SET OF 3 CAKE TINS PANTRY DESIGN) purchased 640 times.
   3. Looking at the size of the transactions: 92 transactions were for just 1 item, 55 transactions for 2 items, all the way up to the biggest transaction: 1 transaction for 1787 items. This indicates that almost half of customers buy a large number of items in each transaction, maybe because many customers of the company are wholesalers.
2. I use Apriori algorithm in arules library to mine frequent itemsets and association rules. I return all the rules that have a support at least 1% and confidence of at least 1%.
3. By looking at the summary table of the rules, the number of rules is 4786489. Length of 7 items has the most rules.
4. Inspect the top 10 rules by decreasing lift. In the table we can see the support and confidence using to get these rules clearly. For example, the first rule has support 0.01060152, confidence 1 and lift 83.44231. The support 0.01060152 indicates that 1.06% of the transactions involve items 22677(FRENCH BLUE METAL DOOR SIGN 2) and 22683(FRENCH BLUE METAL DOOR SIGN 8). The confidence 1 indicates that customers who bought items 22677(FRENCH BLUE METAL DOOR SIGN 2) and 22683(FRENCH BLUE METAL DOOR SIGN 8) will buy items 22682(FRENCH BLUE METAL DOOR SIGN 7) for 100%. The lift 83.44231 indicates that if customers buy items 22677(FRENCH BLUE METAL DOOR SIGN 2) and 22683(FRENCH BLUE METAL DOOR SIGN 8), they are 83.44231 times more likely to buy items 22682(FRENCH BLUE METAL DOOR SIGN 7) compared to random.