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# CODE

### Part 1 - Apriori

```
# Generate candidate itemsets.

C1 = create_candidates(dataset, verbose=True) # candidate 1-itemsets

# Prune candidate 1-itemsets via support-based pruning to generate frequent 1-itemsets.

F1, support_data = support_prune(dataset, C1, 0.1, verbose=True)

# Generate all the frequent itemsets using the Apriori algorithm.

F, support_dataa = apriori(dataset, min_support=0.01, verbose=True)

# Generate the association rules from a list of frequent itemsets.

H = generate_rules(F, support_dataa, min_confidence=0.1, verbose=True)
```

## Part 2 - FPgrowth

```
# list of transactions; each transaction is a list of items
# Generate all the frequent itemsets using the FP-growth algorithm.
F, support_data = fpgrowth(dataset, min_support=0.01, verbose=True)
# Generate the association rules from a list of frequent itemsets.
H = generate_rules_fp(F, support_data, min_confidence=0.1, verbose=True)
```

#### Part 3 - Interest Factor

### interest factor of FP\_growth

```
167 # Generate all the frequent itemsets using the FP-growth algorithm.
    F_FP, support_data_FP = fpgrowth(dataset, min_support=0.01, verbose=True)
    # Generate the association rules from a list of frequent itemsets.
    H_FP = generate_rules_fp(F, support_data_FP, min_confidence=0.1, verbose=True)
    print("----")
    #interest factor
    data=[]
    rules=[]
    support=[]
    interest_factor={}
    for i in range(len(H_FP)):
        sA=support_data_FP[H_FP[i][0]]
        sB=support_data_FP[H_FP[i][1]]
        temp1, temp2="", ""
        for item1 in H_FP[i][0]:
           temp1 = item1
        for item2 in H_FP[i][1]:
           temp2 = item2
        t=frozenset([temp1,temp2])
        sAB=support_data_FP[t]
        inf=sAB/(sA*sB)
        item=temp1+"-->"+temp2
        rules.append([item,sAB,H_FP[i][2],inf])
        interest_factor[item] = inf
    print(interest_factor)
```

## descending order by - support

```
import pandas as pd
names=["ITEM","SUP","CONF","INF"]
df = pd.DataFrame(rules,columns=names)
sup=df.sort_values(by=['SUP'],ascending=True).head(5)
print(sup)
```

```
        ITEM
        SUP
        CONF
        INF

        93
        sausage-->fruit/vegetable juice
        0.010066
        0.107143
        1.482068

        92
        fruit/vegetable juice-->sausage
        0.010066
        0.139241
        1.482068

        277
        waffles-->other vegetables
        0.010066
        0.261905
        1.353565

        74
        sausage-->frankfurter
        0.010066
        0.107143
        1.816810

        73
        frankfurter-->sausage
        0.010066
        0.170690
        1.816810
```

descending order by - confidence

```
conf=df.sort_values(by=['CONF'],ascending=True).head(5)
print(conf)

ITEM SUP CONF INF
200 root vegetables-->pastry 0.010981 0.100746 1.132388
```

```
200 root vegetables-->pastry 0.010981 0.100746 1.132388 106 root vegetables-->margarine 0.011083 0.101679 1.736135 203 tropical fruit-->brown bread 0.010676 0.101744 1.568423 23 other vegetables-->beef 0.019725 0.101944 1.943066 147 other vegetables-->margarine 0.019725 0.101944 1.740663
```

descending order by - interestfactor

```
inf=df.sort_values(by=['INF'],ascending=True).head(5)
print(inf)
```

```
ITEM SUP CONF INF
218 canned beer-->rolls/buns 0.011286 0.145288 0.789888
15 citrus fruit-->soda 0.012811 0.154791 0.887680
228 whole milk-->soda 0.040061 0.156785 0.899112
227 soda-->whole milk 0.040061 0.229738 0.899112
315 bottled beer-->rolls/buns 0.013625 0.169192 0.919847
```

No rules are common in those.

# **RESULTS**

## PART1 AND 2

PART1	PART2
{Instant food products, UHT-milk,	{citrus fruit}: sup = 0.083
abrasive cleaner, artif. sweetener,	{whole milk, citrus fruit}: sup =
baby cosmetics, baby food, bags,	0.031
baking powder, bathroom cleaner,	{yogurt, citrus fruit}: sup = 0.022

beef, berries, beverages, bottled beer, bottled water, brandy, brown bread, butter, butter milk, cake bar, candles, candy, canned beer, canned fish, canned fruit, canned vegetables, cat food, cereals, chewing gum, chicken, chocolate, chocolate marshmallow, citrus fruit, cleaner, cling film/bags, cocoa drinks, coffee, condensed milk, cooking chocolate, cookware, cream, cream cheese , curd, curd cheese, decalcifier, dental care, dessert, detergent, dish cleaner, dishes, dog food, domestic eggs, female sanitary products, finished products, fish, flour, flower (seeds), flower soil/fertilizer, frankfurter, frozen chicken, frozen dessert, frozen fish, frozen fruits, frozen meals, frozen potato products, frozen vegetables, fruit/vegetable juice, grapes, hair spray, ham, hamburger meat, hard cheese, herbs, honey, house keeping products, hygiene articles, ice cream, instant coffee, jam, ketchup, kitchen towels, kitchen utensil, light bulbs, liqueur, liquor, liquor (appetizer), liver loaf, long life bakery product, make up remover, male cosmetics, margarine, mayonnaise, meat, meat spreads, misc. beverages, mustard, napkins, newspapers, nut snack, nuts/prunes, oil, onions, organic products, organic sausage, other vegetables, packaged fruit/vegetables, pasta, pastry, pet care, photo/film, pickled vegetables, pip fruit, popcorn, pork, pot plants, potato products, preservation products, processed cheese, prosecco, pudding powder, ready soups, red/blush wine, rice,

{whole milk, yogurt, citrus fruit}: sup = 0.01{bottled water, citrus fruit}: sup {tropical fruit, citrus fruit}: sup = 0.02 {other vegetables, citrus fruit}: sup = 0.029{whole milk, other vegetables, citrus fruit}: sup = 0.013{root vegetables, citrus fruit}: sup = 0.018{other vegetables, root vegetables, citrus fruit}: sup = 0.01{sausage, citrus fruit}: sup = 0.011 {rolls/buns, citrus fruit}: sup = 0.017 {soda, citrus fruit}: sup = 0.013  $\{margarine\}: sup = 0.059$ {other vegetables, margarine}: sup = 0.02{whole milk, margarine}: sup = 0.024 {rolls/buns, margarine}: sup = 0.015 {root vegetables, margarine}: sup = 0.011 {bottled water, margarine}: sup = 0.01 {yogurt, margarine}: sup = 0.014  ${soda, margarine}: sup = 0.01$ {semi-finished bread}: sup = 0.018 {yogurt}:  $\sup = 0.14$ {whole milk, yogurt}: sup = 0.056  ${soda, yogurt}: sup = 0.027$ {whole milk, soda, yogurt}: sup = 0.01  ${rolls/buns, yogurt}: sup = 0.034$ {whole milk, rolls/buns, yogurt}: sup = 0.016{other vegetables, rolls/buns, yogurt: sup = 0.011

```
roll products , rolls/buns, root
                                       {other vegetables, yogurt}: sup =
                                      0.043
vegetables, rubbing alcohol, rum,
salad dressing, salt, salty snack,
                                       {whole milk, other vegetables,
sauces, sausage, seasonal products,
                                      yogurt: sup = 0.022
semi-finished bread, shopping bags,
                                       {tropical fruit}: sup = 0.105
skin care, sliced cheese, snack
                                       {yogurt, tropical fruit}: sup =
products, soap, soda, soft cheese,
                                      0.029
softener, sound storage medium,
                                       {whole milk, yogurt, tropical
soups, sparkling wine, specialty
                                      fruit}: sup = 0.015
bar, specialty cheese, specialty
                                       {other vegetables, yogurt, tropical
chocolate, specialty fat, specialty
                                       fruit}: sup = 0.012
vegetables, spices, spread cheese,
                                       {other vegetables, tropical fruit}:
sugar, sweet spreads, syrup, tea,
                                      sup = 0.036
tidbits, toilet cleaner, tropical
                                       {whole milk, other vegetables,
fruit, turkey, vinegar, waffles,
                                       tropical fruit}: sup = 0.017
                                       {bottled water, tropical fruit}:
whipped/sour cream, whisky, white
                                       sup = 0.019
bread, white wine, whole milk,
yogurt, zwieback}
                                       {whole milk, tropical fruit}: sup =
{root vegetables}
                                       0.042
{soda}
                                       {rolls/buns, tropical fruit}: sup =
{bottled water}
                                      0.025
                                      {whole milk, rolls/buns, tropical
{rolls/buns}
                                      fruit}: \sup = 0.011
{other vegetables}
{whole milk}
                                       {root vegetables, tropical fruit}:
                                       sup = 0.021
{yogurt}
                                       {other vegetables, root vegetables,
{tropical fruit}
                                      tropical fruit}: sup = 0.012
                                       {whole milk, root vegetables,
{citrus fruit}: sup =
0.08276563294356888
                                       tropical fruit}: sup = 0.012
{margarine}: sup =
                                       {soda, tropical fruit}: sup = 0.021
0.05856634468734113
                                       \{coffee\}: sup = 0.058
                                       {whole milk, coffee}: sup = 0.019
{ready soups}: sup =
0.0018301982714794102
                                       {other vegetables, coffee}: sup =
{semi-finished bread}: sup =
                                      0.013
0.017691916624300967
                                       {rolls/buns, coffee}: sup = 0.011
\{coffee\}: sup = 0.05805795627859685
                                      {whole milk}: \sup = 0.256
{tropical fruit}: sup =
                                       {pip fruit}: sup = 0.076
0.10493136756481952
                                       {yogurt, pip fruit}: sup = 0.018
\{yogurt\}: sup = 0.13950177935943062
                                       {whole milk, pip fruit}: sup = 0.03
{whole milk}: sup =
                                       {rolls/buns, pip fruit}: sup =
0.25551601423487547
                                      0.014
{cream cheese}: sup =
                                       {tropical fruit, pip fruit}: sup =
0.03965429588205389
                                      0.02
                                       {sausage, pip fruit}: sup = 0.011
```

```
{meat spreads}: sup =
                                      {citrus fruit, pip fruit}: sup =
0.004270462633451958
                                      0.014
{pip fruit}: sup =
                                       {other vegetables, pip fruit}: sup
0.07564819522114896
{condensed milk}: sup =
                                       {whole milk, other vegetables, pip
0.010269445856634469
                                       fruit): sup = 0.014
{long life bakery product}: sup =
                                       {root vegetables, pip fruit}: sup =
0.037417386883579054
                                      0.016
{other vegetables}: sup =
                                      {bottled water, pip fruit}: sup =
0.1934926283680732
                                       0.011
{abrasive cleaner}: sup =
                                       {soda, pip fruit}: sup = 0.013
0.0035587188612099642
                                       {pastry, pip fruit}: sup = 0.011
\{butter\}: sup = 0.05541433655312659
                                      \{cream cheese\}: sup = 0.04
\{rice\}: sup = 0.007625826131164209
                                      {yogurt, cream cheese}: sup = 0.012
{rolls/buns}: sup =
                                       {whole milk, cream cheese}: sup =
0.18393492628368074
                                       0.016
{UHT-milk}: sup =
                                       {other vegetables, cream cheese}:
0.03345195729537367
                                      sup = 0.014
{bottled beer}: sup =
                                       {other vegetables}: \sup = 0.193
0.08052872394509406
                                       {whole milk, other vegetables}: sup
                                       = 0.075
{liquor (appetizer)}: sup =
0.007930859176410779
                                      {long life bakery product}: sup =
                                      0.037
{pot plants}: sup =
0.01728520589730554
                                       {whole milk, long life bakery
{cereals}: sup =
                                      product: sup = 0.014
0.0056939501779359435
                                       {other vegetables, long life bakery
{bottled water}: sup =
                                      product: sup = 0.011
0.11052364006100661
                                       {condensed milk}: \sup = 0.01
{chocolate}: sup =
                                       \{butter\}: sup = 0.055
0.04961870869344179
                                       {whole milk, butter}: \sup = 0.028
                                       {yogurt, butter}: \sup = 0.015
{white bread}: sup =
0.042094560244026434
                                       {other vegetables, butter}: sup =
\{\text{curd}\}: \sup = 0.05327910523640061
                                      0.02
\{dishes\}: sup = 0.01759023894255211
                                       {whole milk, other vegetables,
\{flour\}: sup = 0.017386883579054397
                                      butter}: sup = 0.011
\{beef\}: sup = 0.05246568378240976
                                       {rolls/buns, butter}: sup = 0.013
                                       {root vegetables, butter}: sup =
{frankfurter}: sup =
                                       0.013
0.058973055414336555
\{soda\}: sup = 0.17437722419928825
                                       {whipped/sour cream, butter}: sup =
{chicken}: sup =
0.04290798169801729
                                      {rolls/buns}: sup = 0.184
{fruit/vegetable juice}: sup =
                                      {other vegetables, rolls/buns}: sup
0.0722928317234367
                                       = 0.043
```

```
{whole milk, other vegetables,
{newspapers}: sup =
0.07981698017285206
                                       rolls/buns: sup = 0.018
\{\text{sugar}\}: \sup = 0.03385866802236909
                                       {whole milk, rolls/buns}: sup =
{packaged fruit/vegetables}: sup =
                                       0.057
0.013014743263853584
                                       {bottled beer}: \sup = 0.081
{specialty bar}: sup =
                                       {other vegetables, bottled beer}:
0.027351296390442297
                                       sup = 0.016
{butter milk}: sup =
                                       {rolls/buns, bottled beer}: sup =
0.027961362480935434
\{pastry\}: sup = 0.08896797153024912
                                       {bottled water, bottled beer}: sup
{detergent}: sup =
                                       = 0.016
0.019217081850533807
                                       {soda, bottled beer}: sup = 0.017
{processed cheese}: sup =
                                       {whole milk, bottled beer}: sup =
0.016573462125063547
                                       0.02
                                       \{UHT-milk\}: sup = 0.033
{bathroom cleaner}: sup =
                                       {pot plants}: \sup = 0.017
0.0027452974072191155
\{candy\}: sup = 0.0298932384341637
                                       {bottled water}: sup = 0.111
{frozen dessert}: sup =
                                       {other vegetables, bottled water}:
0.010777834265378749
                                       sup = 0.025
{root vegetables}: sup =
                                       {whole milk, other vegetables,
                                       bottled water): sup = 0.011
0.10899847483477376
{salty snack}: sup =
                                       {whole milk, bottled water}: sup =
0.03782409761057448
                                       0.034
{sweet spreads}: sup =
                                       {yogurt, bottled water}: sup =
0.009049313675648195
                                       0.023
{waffles}: sup =
                                       {rolls/buns, bottled water}: sup =
0.038434163701067614
{canned beer}: sup =
                                       {soda, bottled water}: \sup = 0.029
0.07768174885612608
                                       \{chocolate\}: sup = 0.05
{sausage}: sup =
                                       {other vegetables, chocolate}: sup
0.09395017793594305
                                       = 0.013
                                       {rolls/buns, chocolate}: sup =
{brown bread}: sup =
0.06487036095577021
                                       0.012
{shopping bags}: sup =
                                       \{soda, chocolate\}: sup = 0.014
0.09852567361464158
                                       {whole milk, chocolate}: sup =
{beverages}: sup =
                                       0.017
0.026029486527707167
                                       {white bread}: \sup = 0.042
                                       {other vegetables, white bread}:
{hamburger meat}: sup =
0.033248601931875954
                                       sup = 0.014
                                       {whole milk, white bread}: sup =
{hygiene articles}: sup =
0.03294356888662939
                                       0.017
{napkins}: sup =
                                       {soda, white bread}: sup = 0.01
0.05236400610066091
                                       \{\text{curd}\}: \sup = 0.053
                                       {whole milk, curd}: sup = 0.026
```

```
{spices}: sup =
                                       {yogurt, curd}: \sup = 0.017
0.005185561769191663
                                       {whole milk, yogurt, curd}: sup =
{artif. sweetener}: sup =
                                       0.01
0.003253685815963396
                                       {tropical fruit, curd}: sup = 0.01
{berries}: sup =
                                       {other vegetables, curd}: sup =
0.033248601931875954
                                       0.017
\{pork\}: sup = 0.05765124555160142
                                       {rolls/buns, curd}: sup = 0.01
{whipped/sour cream}: sup =
                                       {root vegetables, curd}: sup =
0.07168276563294357
                                       0.011
{grapes}: sup =
                                       {whipped/sour cream, curd}: sup =
0.022369089984748347
                                      0.01
{dessert}: sup =
                                       {dishes}: sup = 0.018
0.03711235383833249
                                       \{flour\}: sup = 0.017
{zwieback}: sup =
                                       \{beef\}: sup = 0.052
0.006914082358922217
                                       {rolls/buns, beef}: sup = 0.014
                                       {whole milk, beef}: \sup = 0.021
{domestic eggs}: sup =
                                      {root vegetables, beef}: sup =
0.06344687341128623
{spread cheese}: sup =
                                      0.017
0.011184544992374174
                                       {other vegetables, beef}: sup =
{misc. beverages}: sup =
                                      0.02
0.02836807320793086
                                       {yogurt, beef}: \sup = 0.012
{hard cheese}: sup =
                                      {soda}: sup = 0.174
0.024504321301474327
                                       {rolls/buns, soda}: sup = 0.038
{cat food}: sup =
                                       {whole milk, soda}: \sup = 0.04
0.023284189120488054
                                       {other vegetables, soda}: sup =
\{\text{ham}\}: \sup = 0.026029486527707167
                                      0.033
{baking powder}: sup =
                                       {whole milk, other vegetables,
0.017691916624300967
                                      soda: sup = 0.014
                                       {frankfurter}: sup = 0.059
\{turkey\}: sup = 0.00813421453990849
{pickled vegetables}: sup =
                                       {rolls/buns, frankfurter}: sup =
0.017895271987798677
                                       0.019
                                       {soda, frankfurter}: sup = 0.011
{chewing gum}: sup =
0.021047280122013217
                                       {whole milk, frankfurter}: sup =
{chocolate marshmallow}: sup =
                                      0.021
0.009049313675648195
                                       {other vegetables, frankfurter}:
\{oil\}: sup = 0.02806304016268429
                                      sup = 0.016
{ice cream}: sup =
                                       {root vegetables, frankfurter}: sup
0.025012709710218607
                                       = 0.01
                                       {sausage, frankfurter}: sup = 0.01
{canned fish}: sup =
0.015048296898830707
                                       {yogurt, frankfurter}: sup = 0.011
{frozen vegetables}: sup =
                                       \{chicken\}: sup = 0.043
0.04809354346720895
                                       {other vegetables, chicken}: sup =
                                      0.018
{seasonal products}: sup =
0.014234875444839857
```

```
{curd cheese}: sup =
                                       {root vegetables, chicken}: sup =
0.005083884087442806
                                       0.011
{red/blush wine}: sup =
                                       {whole milk, chicken}: sup = 0.018
0.019217081850533807
                                       {newspapers}: sup = 0.08
{frozen potato products}: sup =
                                       {tropical fruit, newspapers}: sup =
0.008439247585155059
                                       0.012
{candles}: sup =
                                       \{soda, newspapers\}: sup = 0.015
0.008947635993899338
                                       {rolls/buns, newspapers}: sup =
{flower (seeds)}: sup =
                                       0.02
0.010371123538383325
                                       {yogurt, newspapers}: sup = 0.015
{specialty chocolate}: sup =
                                       {bottled water, newspapers}: sup =
0.03040162684290798
                                       0.011
{specialty fat}: sup =
                                       {whole milk, newspapers}: sup =
0.0036603965429588205
                                       0.027
{sparkling wine}: sup =
                                       {other vegetables, newspapers}: sup
0.005592272496187087
                                       = 0.019
\{\text{salt}\}: \sup = 0.010777834265378749
                                       {root vegetables, newspapers}: sup
{frozen meals}: sup =
                                       = 0.011
0.02836807320793086
                                       {fruit/vegetable juice}: sup =
{canned vegetables}: sup =
0.010777834265378749
                                       {soda, fruit/vegetable juice}: sup
{onions}: sup =
                                       = 0.018
0.031011692933401117
                                       {shopping bags, fruit/vegetable
\{\text{herbs}\}: \sup = 0.01626842907981698
                                       juice\}: sup = 0.011
{white wine}: sup =
                                       {other vegetables, fruit/vegetable
0.019013726487036097
                                       juice\}: sup = 0.021
{brandy}: sup =
                                       {whole milk, other vegetables,
0.004168784951703101
                                       fruit/vegetable juice}: sup = 0.01
{photo/film}: sup =
                                       {tropical fruit, fruit/vegetable
0.009252669039145907
                                       juice}: sup = 0.014
{sliced cheese}: sup =
                                       {bottled water, fruit/vegetable
0.024504321301474327
                                       juice}: \sup = 0.014
\{pasta\}: sup = 0.015048296898830707
                                       {whole milk, fruit/vegetable juice}:
{softener}: sup =
                                       sup = 0.027
0.005490594814438231
                                       {rolls/buns, fruit/vegetable juice}:
{cling film/bags}: sup =
                                       sup = 0.015
0.011387900355871887
                                       {root vegetables, fruit/vegetable
\{fish\}: sup = 0.0029486527707168276
                                       juice}: sup = 0.012
{male cosmetics}: sup =
                                       {sausage, fruit/vegetable juice}:
0.004575495678698526
                                       sup = 0.01
{canned fruit}: sup =
                                       {yogurt, fruit/vegetable juice}:
0.003253685815963396
                                       sup = 0.019
{Instant food products}: sup =
                                       {citrus fruit, fruit/vegetable
0.008032536858159633
                                       juice}: \sup = 0.01
```

```
{soft cheese}: sup =
                                       \{\text{sugar}\}: \sup = 0.034
0.01708185053380783
                                       {whole milk, sugar}: \sup = 0.015
\{\text{honey}\}: \sup = 0.001525165226232842
                                       {other vegetables, sugar}: sup =
{dental care}: sup =
0.005795627859684799
                                       {packaged fruit/vegetables}: sup =
{popcorn}: sup =
                                       0.013
0.007219115404168785
                                       {specialty bar}: \sup = 0.027
{cake bar}: sup =
                                       \{pastry\}: sup = 0.089
0.013218098627351297
                                       \{\text{soda, pastry}\}: \sup = 0.021
                                       {whole milk, pastry}: \sup = 0.033
{snack products}: sup =
0.003050330452465684
                                       {yogurt, pastry}: \sup = 0.018
{flower soil/fertilizer}: sup =
                                       {root vegetables, pastry}: sup =
0.0019318759532282665
                                       {tropical fruit, pastry}: sup =
{specialty cheese}: sup =
0.008540925266903915
                                       0.013
{finished products}: sup =
                                       {rolls/buns, pastry}: sup = 0.021
0.006507371631926792
                                       {sausage, pastry}: \sup = 0.013
{cocoa drinks}: sup =
                                       {other vegetables, pastry}: sup =
0.0022369089984748346
                                       0.023
{dog food}: sup =
                                       {whole milk, other vegetables,
0.008540925266903915
                                       pastry: sup = 0.011
{prosecco}: sup =
                                       {shopping bags, pastry}: sup =
0.0020335536349771225
                                       0.012
{frozen fish}: sup =
                                       {butter milk}: \sup = 0.028
0.011692933401118455
                                       {whole milk, butter milk}: sup =
{make up remover}: sup =
                                       0 012
0.000813421453990849
                                       {other vegetables, butter milk}:
                                       sup = 0.01
{cleaner}: sup =
0.005083884087442806
                                       {detergent}: \sup = 0.019
{female sanitary products}: sup =
                                       \{processed cheese\}: sup = 0.017
0.006100660904931368
                                       {root vegetables}: sup = 0.109
                                       {other vegetables, root vegetables}:
{cookware}: sup =
0.0027452974072191155
                                       sup = 0.047
{dish cleaner}: sup =
                                       {whole milk, other vegetables, root
0.01047280122013218
                                       vegetables: sup = 0.023
\{meat\}: sup = 0.025826131164209457
                                       {rolls/buns, root vegetables}: sup
\{\text{tea}\}: \sup = 0.003863751906456533
                                       = 0.024
{mustard}: sup =
                                       {other vegetables, rolls/buns, root
                                       vegetables}: sup = 0.012
0.011997966446365024
                                       {whole milk, rolls/buns, root
{house keeping products}: sup =
0.008337569903406202
                                       vegetables}: \sup = 0.013
{skin care}: sup =
                                       {whole milk, root vegetables}: sup
0.0035587188612099642
                                       = 0.049
```

```
{potato products}: sup =
                                       {soda, root vegetables}: sup =
0.0028469750889679717
                                       0.019
{liquor}: sup =
                                       {yogurt, root vegetables}: sup =
0.011082867310625319
{pet care}: sup =
                                       {whole milk, yogurt, root
0.00945602440264362
                                       vegetables: sup = 0.015
\{\text{soups}\}: \sup = 0.00681240467717336
                                       {other vegetables, yogurt, root
\{rum\}: sup = 0.004473817996949669
                                       vegetables}: \sup = 0.013
{salad dressing}: sup =
                                       {bottled water, root vegetables}:
                                       sup = 0.016
0.000813421453990849
{sauces}: sup =
                                       \{waffles\}: sup = 0.038
0.005490594814438231
                                       {other vegetables, waffles}: sup =
{vinegar}: sup =
                                       {whole milk, waffles}: sup = 0.013
0.006507371631926792
                                       {salty snack}: sup = 0.038
\{\text{soap}\}: \sup = 0.0026436197254702592
{hair spray}: sup =
                                       {other vegetables, salty snack}:
                                       sup = 0.011
0.0011184544992374173
{instant coffee}: sup =
                                       {whole milk, salty snack}: sup =
0.007422470767666497
                                       0.011
{roll products}: sup =
                                       \{candy\}: sup = 0.03
                                       \{frozen dessert\}: sup = 0.011
0.010269445856634469
                                       \{canned beer\}: sup = 0.078
{mayonnaise}: sup =
0.009150991357397052
                                       {soda, canned beer}: \sup = 0.014
{rubbing alcohol}: sup =
                                       {shopping bags, canned beer}: sup =
0.0010167768174885613
                                       0.011
\{\text{syrup}\}: \sup = 0.003253685815963396
                                       {rolls/buns, canned beer}: sup =
{liver loaf}: sup =
0.005083884087442806
                                       {sausage}: sup = 0.094
{baby cosmetics}: sup =
                                       {rolls/buns, sausage}: sup = 0.031
0.0006100660904931368
                                       \{soda, sausage\}: sup = 0.024
{organic products}: sup =
                                       {shopping bags, sausage}: sup =
0.001626842907981698
                                       0.016
                                       {whole milk, sausage}: sup = 0.03
{nut snack}: sup =
0.00315200813421454
                                       {yogurt, sausage}: \sup = 0.02
{kitchen towels}: sup =
                                       {root vegetables, sausage}: sup =
0.005998983223182512
                                       0.015
{frozen chicken}: sup =
                                       {other vegetables, sausage}: sup =
0.0006100660904931368
                                       0.027
{light bulbs}: sup =
                                       {whole milk, other vegetables,
0.004168784951703101
                                       sausage \}: sup = 0.01
{ketchup}: sup =
                                       {tropical fruit, sausage}: sup =
0.004270462633451958
                                       0.014
{jam}: sup = 0.005388917132689374
                                       {bottled water, sausage}: sup =
                                       0.012
```

```
{decalcifier}: sup =
                                       \{\text{shopping bags}\}: \sup = 0.099
0.001525165226232842
                                       \{\text{soda, shopping bags}\}: \sup = 0.025
{nuts/prunes}: sup =
                                       {rolls/buns, shopping bags}: sup =
0.003355363497712252
{liqueur}: sup =
                                       {whole milk, shopping bags}: sup =
0.0009150991357397051
                                       0.025
                                       {yogurt, shopping bags}: sup =
{organic sausage}: sup =
0.0022369089984748346
                                       0.015
{cream}: sup =
                                       {other vegetables, shopping bags}:
0.0013218098627351296
                                       sup = 0.023
{toilet cleaner}: sup =
                                       {bottled water, shopping bags}: sup
0.0007117437722419929
                                       = 0.011
{specialty vegetables}: sup =
                                       {tropical fruit, shopping bags}:
0.0017285205897305542
                                       sup = 0.014
{baby food}: sup =
                                       {root vegetables, shopping bags}:
0.00010167768174885612
                                       sup = 0.013
{pudding powder}: sup =
                                       {brown bread}: \sup = 0.065
0.002338586680223691
                                       {soda, brown bread}: sup = 0.013
{tidbits}: sup =
                                       {whole milk, brown bread}: sup =
0.002338586680223691
                                       0.025
{whisky}: sup =
                                       {yogurt, brown bread}: sup = 0.015
0.000813421453990849
                                       {root vegetables, brown bread}: sup
                                       = 0.01
{frozen fruits}: sup =
0.0012201321809862736
                                       {tropical fruit, brown bread}: sup
\{bags\}: sup = 0.0004067107269954245
                                       = 0.011
{cooking chocolate}: sup =
                                       {other vegetables, brown bread}:
0.002541942043721403
                                       sup = 0.019
                                       {rolls/buns, brown bread}: sup =
{sound storage medium}: sup =
0.00010167768174885612
                                       0.013
{kitchen utensil}: sup =
                                       {sausage, brown bread}: sup = 0.011
0.0004067107269954245
                                       \{beverages\}: sup = 0.026
{preservation products}: sup =
                                       {napkins}: sup = 0.052
0.00020335536349771224
                                       {other vegetables, napkins}: sup =
{roll products}: sup = 0.01
                                       0.014
\{\text{liquor}\}: \sup = 0.011
                                       {rolls/buns, napkins}: sup = 0.012
\{mustard\}: sup = 0.012
                                       {whole milk, napkins}: \sup = 0.02
{meat}: sup = 0.026
                                       {yogurt, napkins}: sup = 0.012
{dish cleaner}: \sup = 0.01
                                       \{soda, napkins\}: sup = 0.012
\{frozen fish\}: sup = 0.012
                                       {tropical fruit, napkins}: sup =
{cake bar}: \sup = 0.013
{soft cheese}: sup = 0.017
                                       {\text{hamburger meat}}: \sup = 0.033
{cling film/bags}: sup = 0.011
                                       {other vegetables, hamburger meat}:
{pasta}: sup = 0.015
                                       sup = 0.014
{sliced cheese}: sup = 0.025
```

```
{white wine}: \sup = 0.019
                                       {whole milk, hamburger meat}: sup =
\{herbs\}: sup = 0.016
                                       0.015
\{onions\}: sup = 0.031
                                       {hygiene articles}: \sup = 0.033
{canned vegetables}: sup = 0.011
                                       {whole milk, hygiene articles}: sup
\{frozen meals\}: sup = 0.028
                                       = 0.013
{salt}: sup = 0.011
                                       {whipped/sour cream}: \sup = 0.072
{specialty chocolate}: sup = 0.03
                                       {whole milk, whipped/sour cream}:
\{flower (seeds)\}: sup = 0.01
                                       sup = 0.032
\{red/blush wine\}: sup = 0.019
                                       {other vegetables, whipped/sour
                                       cream: sup = 0.029
{seasonal products}: sup = 0.014
\{frozen vegetables\}: sup = 0.048
                                       {whole milk, other vegetables,
{canned fish}: \sup = 0.015
                                       whipped/sour cream}: sup = 0.015
{ice cream}: \sup = 0.025
                                       {soda, whipped/sour cream}: sup =
\{oil\}: sup = 0.028
                                       0.012
{chewing gum}: \sup = 0.021
                                       {rolls/buns, whipped/sour cream}:
{pickled vegetables}: sup = 0.018
                                       sup = 0.015
{baking powder}: \sup = 0.018
                                       {root vegetables, whipped/sour
\{ham\}: sup = 0.026
                                       cream: sup = 0.017
\{cat food\}: sup = 0.023
                                       {citrus fruit, whipped/sour cream}:
{hard cheese}: sup = 0.025
                                       sup = 0.011
\{misc. beverages\}: sup = 0.028
                                       {yogurt, whipped/sour cream}: sup =
{spread cheese}: sup = 0.011
                                       0.021
{domestic eggs}: sup = 0.063
                                       {whole milk, yogurt, whipped/sour
\{dessert\}: sup = 0.037
                                       cream: sup = 0.011
\{grapes\}: sup = 0.022
                                       {other vegetables, yogurt,
{whipped/sour cream}: \sup = 0.072
                                       whipped/sour cream}: sup = 0.01
\{pork\}: sup = 0.058
                                       {tropical fruit, whipped/sour
\{berries\}: sup = 0.033
                                       cream: sup = 0.014
{napkins}: sup = 0.052
                                       \{pork\}: sup = 0.058
{hygiene articles}: \sup = 0.033
                                       {whole milk, pork}: \sup = 0.022
\{\text{hamburger meat}\}: \sup = 0.033
                                       {other vegetables, pork}: sup =
\{beverages\}: sup = 0.026
                                       0.022
                                       {whole milk, other vegetables,
\{\text{shopping bags}\}: \sup = 0.099
                                       pork}: sup = 0.01
{brown bread}: \sup = 0.065
{sausage}: sup = 0.094
                                       {soda, pork}: sup = 0.012
{canned beer}: \sup = 0.078
                                       {rolls/buns, pork}: sup = 0.011
\{waffles\}: sup = 0.038
                                       {root vegetables, pork}: sup =
{salty snack}: sup = 0.038
                                       0.014
{root vegetables}: sup = 0.109
                                       \{berries\}: sup = 0.033
\{frozen dessert\}: sup = 0.011
                                       {whole milk, berries}: sup = 0.012
\{candy\}: sup = 0.03
                                       {other vegetables, berries}: sup =
\{processed cheese\}: sup = 0.017
                                       0.01
{detergent}: \sup = 0.019
                                       {yogurt, berries}: sup = 0.011
{pastry}: sup = 0.089
                                       \{grapes\}: sup = 0.022
```

```
{butter milk}: \sup = 0.028
                                        \{dessert\}: sup = 0.037
{specialty bar}: sup = 0.027
                                        {whole milk, dessert}: sup = 0.014
{packaged fruit/vegetables}: sup =
                                        {other vegetables, dessert}: sup =
\{\text{sugar}\}: \sup = 0.034
                                       {domestic eggs}: \sup = 0.063
\{newspapers\}: sup = 0.08
                                        {whole milk, domestic eggs}: sup =
{fruit/vegetable juice}: sup =
                                       0.03
0.072
                                        {soda, domestic eggs}: sup = 0.012
\{\text{chicken}\}: \sup = 0.043
                                       {yoqurt, domestic eggs}: sup =
{soda}: sup = 0.174
                                       0.014
\{frankfurter\}: sup = 0.059
                                        {root vegetables, domestic eggs}:
                                       sup = 0.014
\{beef\}: sup = 0.052
\{flour\}: sup = 0.017
                                       {tropical fruit, domestic eggs}:
                                       sup = 0.011
{dishes}: sup = 0.018
\{\text{curd}\}: \sup = 0.053
                                       {other vegetables, domestic eggs}:
{white bread}: \sup = 0.042
                                       sup = 0.022
\{chocolate\}: sup = 0.05
                                       {whole milk, other vegetables,
{bottled water}: sup = 0.111
                                       domestic eggs\}: sup = 0.012
{pot plants}: \sup = 0.017
                                       {citrus fruit, domestic eggs}: sup
{bottled beer}: \sup = 0.081
\{UHT-milk\}: sup = 0.033
                                       {rolls/buns, domestic eggs}: sup =
{rolls/buns}: sup = 0.184
                                       0.016
\{butter\}: sup = 0.055
                                       {spread cheese}: sup = 0.011
{other vegetables}: sup = 0.193
                                        \{misc. beverages\}: sup = 0.028
{long life bakery product}: sup =
                                        {hard cheese}: sup = 0.025
0.037
                                       {whole milk, hard cheese}: sup =
{condensed milk}: \sup = 0.01
                                       0.01
{pip fruit}: sup = 0.076
                                       \{cat food\}: sup = 0.023
\{cream cheese\}: sup = 0.04
                                        \{ham\}: sup = 0.026
{whole milk}: \sup = 0.256
                                        {whole milk, ham}: \sup = 0.011
{yogurt}: sup = 0.14
                                        \{baking powder\}: sup = 0.018
{tropical fruit}: sup = 0.105
                                       {pickled vegetables}: sup = 0.018
\{coffee\}: sup = 0.058
                                        \{oil\}: sup = 0.028
{semi-finished bread}: sup = 0.018
                                        {whole milk, oil}: \sup = 0.011
                                        {chewing gum}: \sup = 0.021
\{margarine\}: sup = 0.059
{citrus fruit}: sup = 0.083
                                       {ice cream}: \sup = 0.025
\{margarine, soda\}: sup = 0.01
                                       \{frozen vegetables\}: sup = 0.048
                                        {whole milk, frozen vegetables}:
{newspapers, root vegetables}: sup
= 0.011
                                       sup = 0.02
{white bread, soda}: sup = 0.01
                                       {other vegetables, frozen
{coffee, rolls/buns}: sup = 0.011
                                       vegetables}: \sup = 0.018
{beef, yogurt}: \sup = 0.012
                                       {rolls/buns, frozen vegetables}:
                                       sup = 0.01
{pastry, pip fruit}: sup = 0.011
{whole milk, chicken}: sup = 0.018
```

```
{yogurt, margarine}: sup = 0.014
                                       {root vegetables, frozen
{soda, pip fruit}: sup = 0.013
                                       vegetables): sup = 0.012
{tropical fruit, napkins}: sup =
                                       {yogurt, frozen vegetables}: sup =
{whole milk, onions}: \sup = 0.012
                                       {canned fish}: \sup = 0.015
{onions, other vegetables}: sup =
                                       {seasonal products}: \sup = 0.014
0.014
                                       \{red/blush wine\}: sup = 0.019
{soda, citrus fruit}: sup = 0.013
                                       {specialty chocolate}: sup = 0.03
{newspapers, other vegetables}: sup
                                       \{flower (seeds)\}: sup = 0.01
                                       {salt}: sup = 0.011
= 0.019
{bottled water, pip fruit}: sup =
                                       \{frozen meals\}: sup = 0.028
0.011
                                       {canned vegetables}: sup = 0.011
{bottled water, sausage}: sup =
                                       \{onions\}: sup = 0.031
0.012
                                       {whole milk, onions}: \sup = 0.012
{soda, napkins}: sup = 0.012
                                       {other vegetables, onions}: sup =
{root vegetables, shopping bags}:
                                       0.014
sup = 0.013
                                       {white wine}: \sup = 0.019
{beef, other vegetables}: sup =
                                       \{herbs\}: sup = 0.016
0.02
                                       {sliced cheese}: sup = 0.025
{other vegetables, butter milk}:
                                       {whole milk, sliced cheese}: sup =
sup = 0.01
                                       0.011
{pork, root vegetables}: sup =
                                       {pasta}: sup = 0.015
0.014
                                       {cling film/bags}: \sup = 0.011
{tropical fruit, shopping bags}:
                                       {soft cheese}: sup = 0.017
sup = 0.014
                                       \{cake bar\}: sup = 0.013
{other vegetables, cream cheese}:
                                       \{frozen fish\}: sup = 0.012
sup = 0.014
                                       {dish cleaner}: \sup = 0.01
{yogurt, frankfurter}: sup = 0.011
                                       {meat}: sup = 0.026
{pip fruit, root vegetables}: sup =
                                       \{mustard\}: sup = 0.012
                                       {liquor}: \sup = 0.011
0.016
{whipped/sour cream, tropical
                                       {roll products}: sup = 0.01
                                       {margarine} ---> {soda}: conf =
fruit}: sup = 0.014
{whipped/sour cream, yogurt}: sup =
                                       0.174, \sup = 0.01
0.021
                                       {root vegetables} ---> {newspapers}:
{whole milk, sliced cheese}: sup =
                                       conf = 0.105, sup = 0.011
                                       {newspapers} ---> {root vegetables}:
{bottled water, shopping bags}: sup
                                       conf = 0.144, sup = 0.011
                                       {white bread} ---> {soda}: conf =
= 0.011
{whole milk, white bread}: sup =
                                       0.244, sup = 0.01
                                       {coffee} ---> {rolls/buns}: conf =
{yogurt, frozen vegetables}: sup =
                                       0.189, \sup = 0.011
0 012
                                       {beef} ---> {yogurt}: conf = 0.223,
{yogurt, other vegetables}: sup =
                                       sup = 0.012
0.043
```

```
{pip fruit} ---> {pastry}: conf =
{citrus fruit, rolls/buns}: sup =
0.017
                                      0.141, \sup = 0.011
{pip fruit, other vegetables}: sup
                                       {pastry} ---> {pip fruit}: conf =
                                      0.12, \sup = 0.011
{pip fruit, citrus fruit}: sup =
                                       {chicken} ---> {whole milk}: conf =
0.014
                                       0.41, \sup = 0.018
                                       {margarine} ---> {yogurt}: conf =
{fruit/vegetable juice, citrus
fruit}: sup = 0.01
                                       0.243, \sup = 0.014
{sausage, citrus fruit}: sup =
                                       {yoqurt} ---> {margarine}: conf =
                                       0.102, \sup = 0.014
0.011
                                       {pip fruit} ---> {soda}: conf =
{sausage, tropical fruit}: sup =
0.014
                                      0.176, \sup = 0.013
{sausage, pip fruit}: sup = 0.011
                                      {napkins} ---> {tropical fruit}:
                                      conf = 0.192, sup = 0.01
{whole milk, hygiene articles}: sup
= 0.013
                                       {onions} ---> {whole milk}: conf =
{whole milk, hard cheese}: sup =
                                      0.39, \sup = 0.012
0.01
                                       {onions} ---> {other vegetables}:
{coffee, other vegetables}: sup =
                                       conf = 0.459, sup = 0.014
0.013
                                       {citrus fruit} ---> {soda}: conf =
{pastry, other vegetables}: sup =
                                       0.155, \sup = 0.013
0.023
                                       {newspapers} ---> {other
{other vegetables, shopping bags}:
                                      vegetables): conf = 0.242, sup =
                                      0.019
sup = 0.023
{pastry, shopping bags}: sup =
                                       {pip fruit} ---> {bottled water}:
                                       conf = 0.14, sup = 0.011
0.012
{whole milk, cream cheese}: sup =
                                       {sausage} ---> {bottled water}:
                                       conf = 0.128, sup = 0.012
{hamburger meat, whole milk}: sup =
                                       {bottled water} ---> {sausage}:
0.015
                                       conf = 0.109, sup = 0.012
{bottled water, margarine}: sup =
                                       {napkins} ---> {soda}: conf =
0.01
                                       0.229, sup = 0.012
{frankfurter, other vegetables}:
                                       {shopping bags} ---> {root
sup = 0.016
                                       vegetables): conf = 0.13, sup =
{frankfurter, root vegetables}: sup
                                      0.013
= 0.01
                                       {root vegetables} ---> {shopping
{sausage, other vegetables}: sup =
                                      bags\}: conf = 0.118, sup = 0.013
0.027
                                       {other vegetables} ---> {beef}:
                                       conf = 0.102, sup = 0.02
{sausage, frankfurter}: sup = 0.01
                                       {beef} ---> {other vegetables}:
{beef, root vegetables}: sup =
                                      conf = 0.376, sup = 0.02
{whole milk, bottled beer}: sup =
                                       {butter milk} ---> {other
0 02
                                       vegetables): conf = 0.371, sup =
{yogurt, fruit/vegetable juice}:
                                      0.01
sup = 0.019
```

```
{root vegetables} ---> {pork}: conf
{yogurt, shopping bags}: sup =
0.015
                                       = 0.125, \sup = 0.014
{whole milk, shopping bags}: sup =
                                       {pork} ---> {root vegetables}: conf
                                       = 0.236, \sup = 0.014
{yogurt, napkins}: \sup = 0.012
                                       {shopping bags} ---> {tropical
{whole milk, napkins}: sup = 0.02
                                       fruit): conf = 0.137, sup = 0.014
{pork, rolls/buns}: sup = 0.011
                                       {tropical fruit} ---> {shopping
{other vegetables, citrus fruit}:
                                      bags}: conf = 0.129, sup = 0.014
sup = 0.029
                                       {cream cheese} ---> {other
                                       vegetables}: conf = 0.346, sup =
{other vegetables, chicken}: sup =
0.018
                                       0.014
{root vegetables, citrus fruit}:
                                       {frankfurter} ---> {yogurt}: conf =
sup = 0.018
                                       0.19, \sup = 0.011
{chicken, root vegetables}: sup =
                                       {root vegetables} ---> {pip fruit}:
0.011
                                       conf = 0.143, sup = 0.016
{sausage, fruit/vegetable juice}:
                                       {pip fruit} ---> {root vegetables}:
sup = 0.01
                                      conf = 0.206, sup = 0.016
{sausage, brown bread}: sup = 0.011
                                       {tropical fruit} ---> {whipped/sour
{whipped/sour cream, citrus fruit}:
                                      cream\}: conf = 0.132, sup = 0.014
sup = 0.011
                                       {whipped/sour cream} ---> {tropical
{yogurt, sausage}: sup = 0.02
                                       fruit}: conf = 0.193, sup = 0.014
{sausage, root vegetables}: sup =
                                       {yogurt} ---> {whipped/sour cream}:
0.015
                                       conf = 0.149, sup = 0.021
{margarine, rolls/buns}: sup =
                                       {whipped/sour cream} ---> {yogurt}:
                                       conf = 0.289, sup = 0.021
0.015
{whole milk, fruit/vegetable juice}:
                                      {sliced cheese} ---> {whole milk}:
sup = 0.027
                                      conf = 0.44, sup = 0.011
{fruit/vegetable juice, rolls/buns}:
                                       {shopping bags} ---> {bottled
sup = 0.015
                                       water\}: conf = 0.111, sup = 0.011
{margarine, root vegetables}: sup =
                                       {white bread} ---> {whole milk}:
                                      conf = 0.406, sup = 0.017
0.011
{fruit/vegetable juice, root
                                       {frozen vegetables} ---> {yogurt}:
vegetables): sup = 0.012
                                       conf = 0.258, sup = 0.012
{rolls/buns, domestic eggs}: sup =
                                       {other vegetables} ---> {yogurt}:
                                       conf = 0.224, sup = 0.043
0.016
{frozen vegetables, rolls/buns}:
                                       {yogurt} ---> {other vegetables}:
sup = 0.01
                                       conf = 0.311, sup = 0.043
                                       {citrus fruit} ---> {rolls/buns}:
{frozen vegetables, root
vegetables): sup = 0.012
                                       conf = 0.203, sup = 0.017
{bottled beer, soda}: \sup = 0.017
                                       {other vegetables} ---> {pip fruit}:
{bottled water, bottled beer}: sup
                                       conf = 0.135, sup = 0.026
                                       {pip fruit} ---> {other vegetables}:
= 0.016
{bottled water, fruit/vegetable
                                       conf = 0.345, sup = 0.026
juice}: sup = 0.014
```

```
{whole milk, butter milk}: sup =
                                       {citrus fruit} ---> {pip fruit}:
                                       conf = 0.167, sup = 0.014
0.012
                                       {pip fruit} ---> {citrus fruit}:
{whole milk, frankfurter}: sup =
                                       conf = 0.183, sup = 0.014
{whole milk, newspapers}: sup =
                                       {citrus fruit} ---> {fruit/vegetable
0.027
                                       juice}: conf = 0.125, sup = 0.01
{citrus fruit, domestic eggs}: sup
                                       {fruit/vegetable juice} ---> {citrus
= 0.01
                                       fruit}: conf = 0.143, sup = 0.01
                                       {citrus fruit} ---> {sausage}: conf
{whole milk, oil}: \sup = 0.011
{whole milk, margarine}: sup =
                                       = 0.136, \sup = 0.011
                                       {sausage} ---> {citrus fruit}: conf
0.024
{pip fruit, tropical fruit}: sup =
                                      = 0.12, \sup = 0.011
                                       {tropical fruit} ---> {sausage}:
                                      conf = 0.133, sup = 0.014
{whole milk, pip fruit}: \sup = 0.03
                                       {sausage} ---> {tropical fruit}:
{whole milk, rolls/buns}: sup =
0.057
                                       conf = 0.148, sup = 0.014
                                       {pip fruit} ---> {sausage}: conf =
{pip fruit, rolls/buns}: sup =
0.014
                                       0.142, \sup = 0.011
{whole milk, chocolate}: sup =
                                       {sausage} ---> {pip fruit}: conf =
                                       0.115, \sup = 0.011
{brown bread, rolls/buns}: sup =
                                       {hygiene articles} ---> {whole
0.013
                                      milk: conf = 0.389, sup = 0.013
                                       {hard cheese} ---> {whole milk}:
{beef, whole milk}: \sup = 0.021
{whole milk, sausage}: sup = 0.03
                                       conf = 0.411, sup = 0.01
                                       {coffee} ---> {other vegetables}:
{sausage, pastry}: sup = 0.013
                                       conf = 0.231, sup = 0.013
{salty snack, whole milk}: sup =
                                       {other vegetables} ---> {pastry}:
{frozen vegetables, whole milk}:
                                       conf = 0.117, sup = 0.023
sup = 0.02
                                       {pastry} ---> {other vegetables}:
{frozen vegetables, other
                                       conf = 0.254, sup = 0.023
vegetables}: \sup = 0.018
                                       {shopping bags} ---> {other
{pastry, rolls/buns}: sup = 0.021
                                      vegetables): conf = 0.235, sup =
{beef, rolls/buns}: \sup = 0.014
                                       0.023
{margarine, other vegetables}: sup
                                       {other vegetables} ---> {shopping
= 0.02
                                      bags}: conf = 0.12, sup = 0.023
{fruit/vegetable juice, tropical
                                      {shopping bags} ---> {pastry}: conf
fruit}: sup = 0.014
                                       = 0.121, \sup = 0.012
{fruit/vegetable juice, other
                                       {pastry} ---> {shopping bags}: conf
vegetables): sup = 0.021
                                       = 0.134, \sup = 0.012
{brown bread, other vegetables}:
                                       {cream cheese} ---> {whole milk}:
sup = 0.019
                                       conf = 0.415, sup = 0.016
{other vegetables, domestic eggs}:
                                       {hamburger meat} ---> {whole milk}:
sup = 0.022
                                       conf = 0.443, sup = 0.015
{whole milk, ham}: \sup = 0.011
```

```
{margarine} ---> {bottled water}:
{butter, other vegetables}: sup =
0.02
                                       conf = 0.175, sup = 0.01
{butter, rolls/buns}: sup = 0.013
                                       {frankfurter} ---> {other
{other vegetables, curd}: sup =
                                      vegetables}: conf = 0.279, sup =
0.017
                                       0.016
{curd, rolls/buns}: \sup = 0.01
                                       {frankfurter} ---> {root
                                       vegetables}: conf = 0.172, sup =
{butter, root vegetables}: sup =
0.013
                                       0.01
{bottled water, root vegetables}:
                                       {other vegetables} ---> {sausage}:
sup = 0.016
                                       conf = 0.139, sup = 0.027
{curd, root vegetables}: sup =
                                       {sausage} ---> {other vegetables}:
0.011
                                      conf = 0.287, sup = 0.027
{whipped/sour cream, butter}: sup =
                                      {frankfurter} ---> {sausage}: conf
                                       = 0.171, \sup = 0.01
0.01
{whipped/sour cream, rolls/buns}:
                                       {sausage} ---> {frankfurter}: conf
sup = 0.015
                                       = 0.107, \sup = 0.01
{whipped/sour cream, curd}: sup =
                                       {root vegetables} ---> {beef}: conf
0.01
                                       = 0.16, \sup = 0.017
{whipped/sour cream, root
                                       {beef} ---> {root vegetables}: conf
vegetables}: \sup = 0.017
                                       = 0.331, \sup = 0.017
{yogurt, rolls/buns}: \sup = 0.034
                                       {bottled beer} ---> {whole milk}:
                                      conf = 0.254, sup = 0.02
{bottled water, soda}: \sup = 0.029
                                       {fruit/vegetable juice} --->
{yogurt, newspapers}: sup = 0.015
{newspapers, rolls/buns}: sup =
                                       {yogurt}: conf = 0.259, sup = 0.019
                                       {yogurt} ---> {fruit/vegetable
0.02
                                      juice}: conf = 0.134, sup = 0.019
{bottled water, newspapers}: sup =
                                       {shopping bags} ---> {yogurt}: conf
                                      = 0.155, \sup = 0.015
{yogurt, berries}: sup = 0.011
{whole milk, coffee}: sup = 0.019
                                       {yogurt} ---> {shopping bags}: conf
{soda, tropical fruit}: sup = 0.021
                                      = 0.109, \sup = 0.015
                                       {shopping bags} ---> {whole milk}:
{yogurt, soda}: \sup = 0.027
{pastry, tropical fruit}: sup =
                                       conf = 0.249, sup = 0.025
0.013
                                       {napkins} ---> {yogurt}: conf =
{yogurt, pastry}: \sup = 0.018
                                       0.235, \sup = 0.012
                                       {napkins} ---> {whole milk}: conf =
{whole milk, pastry}: sup = 0.033
{yogurt, root vegetables}: sup =
                                       0.377, \sup = 0.02
0.026
                                       {pork} ---> {rolls/buns}: conf =
                                       0.196, \sup = 0.011
{soda, root vegetables}: sup =
                                       {citrus fruit} ---> {other
0.019
{pastry, root vegetables}: sup =
                                      vegetables}: conf = 0.349, sup =
0.011
                                      0.029
                                      {other vegetables} ---> {citrus
{whole milk, waffles}: sup = 0.013
{brown bread, tropical fruit}: sup
                                       fruit}: conf = 0.149, sup = 0.029
= 0.011
```

```
{chicken} ---> {other vegetables}:
{yogurt, brown bread}: sup = 0.015
{whole milk, brown bread}: sup =
                                       conf = 0.417, sup = 0.018
0.025
                                       {citrus fruit} ---> {root
{brown bread, root vegetables}: sup
                                       vegetables}: conf = 0.214, sup =
= 0.01
                                       0.018
{tropical fruit, domestic eggs}:
                                       {root vegetables} ---> {citrus
                                       fruit}: conf = 0.162, sup = 0.018
sup = 0.011
{yogurt, domestic eggs}: sup =
                                       {chicken} ---> {root vegetables}:
                                       conf = 0.254, sup = 0.011
0.014
                                       {fruit/vegetable juice} --->
{whole milk, domestic eggs}: sup =
0.03
                                       \{\text{sausage}\}: \text{conf} = 0.139, \text{sup} = 0.01
{soda, domestic eggs}: sup = 0.012
                                       {sausage} ---> {fruit/vegetable
{root vegetables, domestic eggs}:
                                       juice}: conf = 0.107, sup = 0.01
sup = 0.014
                                       {brown bread} ---> {sausage}: conf
{canned beer, rolls/buns}: sup =
                                       = 0.165, \sup = 0.011
0.011
                                       {sausage} ---> {brown bread}: conf
{shopping bags, rolls/buns}: sup =
                                       = 0.114, \sup = 0.011
0.02
                                       {citrus fruit} ---> {whipped/sour
                                       cream\}: conf = 0.131, sup = 0.011
{sausage, shopping bags}: sup =
                                       {whipped/sour cream} ---> {citrus
                                       fruit}: conf = 0.152, sup = 0.011
{whole milk, dessert}: \sup = 0.014
{dessert, other vegetables}: sup =
                                       {sausage} ---> {yogurt}: conf =
0.012
                                       0.209, \sup = 0.02
{pastry, soda}: \sup = 0.021
                                       {yogurt} ---> {sausage}: conf =
{whole milk, soda}: \sup = 0.04
                                       0.141, \sup = 0.02
{soda, other vegetables}: sup =
                                       {root vegetables} ---> {sausage}:
                                       conf = 0.137, sup = 0.015
{whole milk, berries}: sup = 0.012
                                       {sausage} ---> {root vegetables}:
{berries, other vegetables}: sup =
                                       conf = 0.159, sup = 0.015
0.01
                                       {margarine} ---> {rolls/buns}: conf
                                       = 0.252, \sup = 0.015
{whole milk, pork}: \sup = 0.022
{pork, other vegetables}: sup =
                                       {fruit/vegetable juice} ---> {whole
0.022
                                       milk: conf = 0.368, sup = 0.027
\{pork, soda\}: sup = 0.012
                                       {whole milk} ---> {fruit/vegetable
                                       juice}: conf = 0.104, sup = 0.027
{whipped/sour cream, whole milk}:
sup = 0.032
                                       {fruit/vegetable juice} --->
{whipped/sour cream, other
                                       {rolls/buns}: conf = 0.201, sup =
vegetables}: sup = 0.029
                                       0.015
                                       {root vegetables} ---> {margarine}:
{whipped/sour cream, soda}: sup =
0.012
                                       conf = 0.102, sup = 0.011
{whole milk, sugar}: \sup = 0.015
                                       {margarine} ---> {root vegetables}:
{other vegetables, sugar}: sup =
                                       conf = 0.189, sup = 0.011
0.011
```

```
{whole milk, root vegetables}: sup
                                       {root vegetables} --->
= 0.049
                                       {fruit/vegetable juice}: conf =
{bottled water, rolls/buns}: sup =
                                       0.11, \sup = 0.012
                                       {fruit/vegetable juice} ---> {root
{hamburger meat, other vegetables}:
                                      vegetables): conf = 0.166, sup =
sup = 0.014
                                       0.012
                                       {domestic eggs} ---> {rolls/buns}:
{other vegetables, napkins}: sup =
0.014
                                       conf = 0.247, sup = 0.016
{napkins, rolls/buns}: sup = 0.012
                                       {frozen vegetables} --->
                                       {rolls/buns}: conf = 0.211, sup =
{fruit/vegetable juice, soda}: sup
= 0.018
                                       0.01
{newspapers, soda}: \sup = 0.015
                                       {root vegetables} ---> {frozen
{canned beer, soda}: \sup = 0.014
                                       vegetables): conf = 0.106, sup =
{brown bread, soda}: \sup = 0.013
                                      0.012
{soda, shopping bags}: sup = 0.025
                                       {frozen vegetables} ---> {root
{fruit/vegetable juice, shopping
                                       vegetables): conf = 0.241, sup =
bags\}: sup = 0.011
                                      0.012
{canned beer, shopping bags}: sup =
                                       {bottled beer} ---> {soda}: conf =
0.011
                                       0.211, \sup = 0.017
{chocolate, rolls/buns}: sup =
                                       {bottled beer} ---> {bottled water}:
0.012
                                       conf = 0.196, sup = 0.016
{chocolate, soda}: \sup = 0.014
                                       {bottled water} ---> {bottled beer}:
                                      conf = 0.143, sup = 0.016
{sausage, rolls/buns}: \sup = 0.031
{sausage, soda}: sup = 0.024
                                       {fruit/vegetable juice} --->
{tropical fruit, rolls/buns}: sup =
                                       {bottled water}: conf = 0.197, sup
                                       = 0.014
0.025
{tropical fruit, root vegetables}:
                                       {bottled water} --->
sup = 0.021
                                       {fruit/vegetable juice}: conf =
{other vegetables, root vegetables}:
                                      0.129, \sup = 0.014
sup = 0.047
                                       {butter milk} ---> {whole milk}:
{root vegetables, rolls/buns}: sup
                                       conf = 0.415, sup = 0.012
= 0.024
                                       {frankfurter} ---> {whole milk}:
                                       conf = 0.348, sup = 0.021
{salty snack, other vegetables}:
sup = 0.011
                                       {newspapers} ---> {whole milk}:
{other vegetables, waffles}: sup =
                                      conf = 0.343, sup = 0.027
                                       {whole milk} ---> {newspapers}:
{newspapers, tropical fruit}: sup =
                                      conf = 0.107, sup = 0.027
                                       {domestic eggs} ---> {citrus fruit}:
0.012
{frankfurter, rolls/buns}: sup =
                                       conf = 0.163, sup = 0.01
                                       {citrus fruit} ---> {domestic eggs}:
{soda, rolls/buns}: sup = 0.038
                                       conf = 0.125, sup = 0.01
{soda, frankfurter}: \sup = 0.011
                                       {oil} ---> {whole milk}: conf =
{tropical fruit, citrus fruit}: sup
                                      0.402, \sup = 0.011
= 0.02
```

```
{margarine} ---> {whole milk}: conf
{yogurt, citrus fruit}: sup = 0.022
{whole milk, citrus fruit}: sup =
                                      = 0.413, \sup = 0.024
0.031
                                       {tropical fruit} ---> {pip fruit}:
{whole milk, tropical fruit}: sup =
                                      conf = 0.195, sup = 0.02
0.042
                                       {pip fruit} ---> {tropical fruit}:
{bottled water, citrus fruit}: sup
                                       conf = 0.27, sup = 0.02
                                       {pip fruit} ---> {whole milk}: conf
= 0.014
{yogurt, bottled water}: sup =
                                       = 0.398, \sup = 0.03
                                       {whole milk} ---> {pip fruit}: conf
0.023
                                       = 0.118, sup = 0.03
{whole milk, bottled water}: sup =
                                       {rolls/buns} ---> {whole milk}:
0.034
{tropical fruit, curd}: sup = 0.01
                                      conf = 0.308, sup = 0.057
{yogurt, curd}: \sup = 0.017
                                       {whole milk} ---> {rolls/buns}:
                                      conf = 0.222, sup = 0.057
{whole milk, curd}: \sup = 0.026
{tropical fruit, other vegetables}:
                                       {pip fruit} ---> {rolls/buns}: conf
sup = 0.036
                                       = 0.184, \sup = 0.014
{bottled water, tropical fruit}:
                                       {chocolate} ---> {whole milk}: conf
sup = 0.019
                                       = 0.336, \sup = 0.017
{bottled water, other vegetables}:
                                       {brown bread} ---> {rolls/buns}:
sup = 0.025
                                       conf = 0.194, sup = 0.013
{chocolate, other vegetables}: sup
                                       {beef} ---> {whole milk}: conf =
= 0.013
                                      0.405, \sup = 0.021
                                       {sausage} ---> {whole milk}: conf =
{white bread, other vegetables}:
sup = 0.014
                                      0.318, \sup = 0.03
{other vegetables, rolls/buns}: sup
                                       {whole milk} ---> {sausage}: conf =
                                      0.117, \sup = 0.03
= 0.043
{bottled beer, other vegetables}:
                                       {pastry} ---> {sausage}: conf =
sup = 0.016
                                      0.141, \sup = 0.013
{bottled beer, rolls/buns}: sup =
                                       {sausage} ---> {pastry}: conf =
0.014
                                      0.133, \sup = 0.013
{yogurt, whole milk}: \sup = 0.056
                                      {salty snack} ---> {whole milk}:
{yogurt, butter}: \sup = 0.015
                                      conf = 0.296, sup = 0.011
{whole milk, butter}: \sup = 0.028
                                       {frozen vegetables} ---> {whole
{whole milk, long life bakery
                                      milk: conf = 0.425, sup = 0.02
                                      {frozen vegetables} ---> {other
product: sup = 0.014
{whole milk, other vegetables}: sup
                                      vegetables}: conf = 0.37, sup =
= 0.075
                                      0.018
{long life bakery product, other
                                       {rolls/buns} ---> {pastry}: conf =
vegetables): sup = 0.011
                                      0.114, \sup = 0.021
{yogurt, cream cheese}: sup = 0.012
                                      {pastry} ---> {rolls/buns}: conf =
{yogurt, pip fruit}: sup = 0.018
                                      0.235, sup = 0.021
{yogurt, tropical fruit}: sup =
                                       {beef} ---> {rolls/buns}: conf =
0.029
                                      0.26, \sup = 0.014
```

```
{whole milk, pastry, other
                                       {other vegetables} ---> {margarine}:
vegetables}: sup = 0.011
                                      conf = 0.102, sup = 0.02
                                      {margarine} ---> {other vegetables}:
{yogurt, other vegetables,
rolls/buns: sup = 0.011
                                      conf = 0.337, sup = 0.02
{whole milk, bottled water, other
                                      {tropical fruit} --->
vegetables): sup = 0.011
                                       {fruit/vegetable juice}: conf =
{yogurt, whole milk, rolls/buns}:
                                      0.131, \sup = 0.014
sup = 0.016
                                      {fruit/vegetable juice} --->
{whole milk, other vegetables,
                                      {tropical fruit}: conf = 0.19, sup
citrus fruit}: sup = 0.013
                                       = 0.014
                                       {other vegetables} --->
{whole milk, sausage, other
vegetables): sup = 0.01
                                      {fruit/vegetable juice}: conf =
{whole milk, butter, other
                                      0.109, \sup = 0.021
vegetables}: sup = 0.011
                                      {fruit/vegetable juice} ---> {other
{yogurt, tropical fruit, other
                                      vegetables): conf = 0.291, sup =
vegetables): sup = 0.012
                                      0.021
{yogurt, whipped/sour cream, other
                                      {brown bread} ---> {other
vegetables): sup = 0.01
                                      vegetables): conf = 0.288, sup =
{whipped/sour cream, whole milk,
                                      0.019
yogurt: sup = 0.011
                                       {domestic eggs} ---> {other
                                      vegetables): conf = 0.351, sup =
{whole milk, tropical fruit, other
vegetables}: \sup = 0.017
                                      0.022
                                      {other vegetables} ---> {domestic
{whole milk, fruit/vegetable juice,
other vegetables}: \sup = 0.01
                                      eggs\}: conf = 0.115, sup = 0.022
{yogurt, whole milk, other
                                       {ham} ---> {whole milk}: conf =
vegetables}: \sup = 0.022
                                      0.441, \sup = 0.011
{yogurt, root vegetables, other
                                      {other vegetables} ---> {butter}:
                                      conf = 0.104, sup = 0.02
vegetables): sup = 0.013
{whole milk, pip fruit, other
                                       {butter} ---> {other vegetables}:
vegetables: sup = 0.014
                                      conf = 0.361, sup = 0.02
                                      {butter} ---> {rolls/buns}: conf =
{whole milk, other vegetables,
domestic eggs}: sup = 0.012
                                      0.242, \sup = 0.013
{root vegetables, other vegetables,
                                      {curd} ---> {other vegetables}:
citrus fruit}: \sup = 0.01
                                      conf = 0.323, sup = 0.017
{whole milk, root vegetables,
                                      {curd} ---> {rolls/buns}: conf =
rolls/buns: sup = 0.013
                                      0.189, \sup = 0.01
{whole milk, other vegetables,
                                      {root vegetables} ---> {butter}:
rolls/buns: sup = 0.018
                                      conf = 0.118, sup = 0.013
{whole milk, tropical fruit,
                                      {butter} ---> {root vegetables}:
rolls/buns: sup = 0.011
                                      conf = 0.233, sup = 0.013
{whole milk, tropical fruit, root
                                      {root vegetables} ---> {bottled
vegetables): sup = 0.012
                                      water\}: conf = 0.144, sup = 0.016
{yogurt, whole milk, root
vegetables): sup = 0.015
```

```
{bottled water} ---> {root
{yogurt, whole milk, soda}: sup =
0.01
                                       vegetables): conf = 0.142, sup =
{whipped/sour cream, whole milk,
                                       0.016
other vegetables}: sup = 0.015
                                       {curd} ---> {root vegetables}: conf
{whole milk, pork, other
                                       = 0.204, \sup = 0.011
vegetables): sup = 0.01
                                       {butter} ---> {whipped/sour cream}:
{whole milk, soda, other
                                       conf = 0.183, sup = 0.01
vegetables}: \sup = 0.014
                                       {whipped/sour cream} ---> {butter}:
                                       conf = 0.142, sup = 0.01
{whole milk, other vegetables, root
vegetables}: \sup = 0.023
                                       {whipped/sour cream} --->
{other vegetables, root vegetables,
                                       {rolls/buns}: conf = 0.204, sup =
rolls/buns: sup = 0.012
                                       0.015
{other vegetables, tropical fruit,
                                       {curd} ---> {whipped/sour cream}:
root vegetables}: sup = 0.012
                                       conf = 0.197, sup = 0.01
{yogurt, whole milk, curd}: sup =
                                       {whipped/sour cream} ---> {curd}:
0.01
                                       conf = 0.146, sup = 0.01
                                       {root vegetables} ---> {whipped/sour
{yogurt, whole milk, tropical
fruit}: \sup = 0.015
                                       cream\}: conf = 0.157, sup = 0.017
{yogurt, whole milk, citrus fruit}:
                                       {whipped/sour cream} ---> {root
sup = 0.01
                                       vegetables): conf = 0.238, sup =
{margarine} ---> {soda}: conf =
                                       0.017
0.174, \sup = 0.01
                                       {rolls/buns} ---> {yogurt}: conf =
{root vegetables} ---> {newspapers}:
                                       0.187, \sup = 0.034
conf = 0.105, sup = 0.011
                                       {yogurt} ---> {rolls/buns}: conf =
{newspapers} ---> {root vegetables}:
                                       0.246, \sup = 0.034
conf = 0.144, sup = 0.011
                                       {soda} ---> {bottled water}: conf =
{white bread} ---> {soda}: conf =
                                       0.166, \sup = 0.029
                                       {bottled water} ---> {soda}: conf =
0.244, \sup = 0.01
{coffee} ---> {rolls/buns}: conf =
                                       0.262, \sup = 0.029
0.189, \sup = 0.011
                                       {newspapers} ---> {yogurt}: conf =
{beef} ---> {yogurt}: conf = 0.223,
                                       0.192, \sup = 0.015
sup = 0.012
                                       {yogurt} ---> {newspapers}: conf =
{pip fruit} ---> {pastry}: conf =
                                       0.11, \sup = 0.015
0.141, \sup = 0.011
                                       {rolls/buns} ---> {newspapers}:
{pastry} ---> {pip fruit}: conf =
                                       conf = 0.107, sup = 0.02
0.12, \sup = 0.011
                                       {newspapers} ---> {rolls/buns}:
{chicken} ---> {whole milk}: conf =
                                       conf = 0.247, sup = 0.02
0.41, \sup = 0.018
                                       {newspapers} ---> {bottled water}:
{margarine} ---> {yogurt}: conf =
                                       conf = 0.141, sup = 0.011
0.243, \sup = 0.014
                                       {bottled water} ---> {newspapers}:
{yogurt} ---> {margarine}: conf =
                                       conf = 0.102, sup = 0.011
0.102, \sup = 0.014
                                       {berries} ---> {yogurt}: conf =
{pip fruit} ---> {soda}: conf =
                                       0.318, \sup = 0.011
0.176, \sup = 0.013
```

```
{coffee} ---> {whole milk}: conf =
{napkins} ---> {tropical fruit}:
conf = 0.192, sup = 0.01
                                       0.322, \sup = 0.019
{onions} ---> {whole milk}: conf =
                                       {tropical fruit} ---> {soda}: conf
0.39, \sup = 0.012
                                       = 0.199, \sup = 0.021
{onions} ---> {other vegetables}:
                                       {soda} ---> {tropical fruit}: conf
conf = 0.459, sup = 0.014
                                       = 0.12, \sup = 0.021
{citrus fruit} ---> {soda}: conf =
                                       {soda} \longrightarrow {yogurt}: conf = 0.157,
0.155, \sup = 0.013
                                       sup = 0.027
{newspapers} ---> {other
                                       \{yogurt\} ---> \{soda\}: conf = 0.196,
vegetables): conf = 0.242, sup =
                                       sup = 0.027
0.019
                                       {tropical fruit} ---> {pastry}:
{pip fruit} ---> {bottled water}:
                                       conf = 0.126, sup = 0.013
conf = 0.14, sup = 0.011
                                       {pastry} ---> {tropical fruit}:
{sausage} ---> {bottled water}:
                                       conf = 0.149, sup = 0.013
conf = 0.128, sup = 0.012
                                       {pastry} ---> {yogurt}: conf =
{bottled water} ---> {sausage}:
                                       0.199, \sup = 0.018
conf = 0.109, sup = 0.012
                                       {yogurt} ---> {pastry}: conf =
{napkins} ---> {soda}: conf =
                                       0.127, \sup = 0.018
0.229, \sup = 0.012
                                       {pastry} ---> {whole milk}: conf =
{shopping bags} ---> {root
                                       0.374, \sup = 0.033
vegetables): conf = 0.13, sup =
                                       {whole milk} ---> {pastry}: conf =
0.013
                                       0.13, \sup = 0.033
{root vegetables} ---> {shopping
                                       {root vegetables} ---> {yogurt}:
bags}: conf = 0.118, sup = 0.013
                                       conf = 0.237, sup = 0.026
{other vegetables} ---> {beef}:
                                       {yogurt} ---> {root vegetables}:
conf = 0.102, sup = 0.02
                                       conf = 0.185, sup = 0.026
{beef} ---> {other vegetables}:
                                       {root vegetables} ---> {soda}: conf
conf = 0.376, sup = 0.02
                                       = 0.171, \sup = 0.019
{butter milk} ---> {other
                                       {soda} ---> {root vegetables}: conf
vegetables}: conf = 0.371, sup =
                                       = 0.107, \sup = 0.019
0.01
                                       {root vegetables} ---> {pastry}:
{root vegetables} ---> {pork}: conf
                                       conf = 0.101, sup = 0.011
= 0.125, \sup = 0.014
                                       {pastry} ---> {root vegetables}:
{pork} ---> {root vegetables}: conf
                                       conf = 0.123, sup = 0.011
= 0.236, \sup = 0.014
                                       {waffles} ---> {whole milk}: conf =
{shopping bags} ---> {tropical
                                       0.331, \sup = 0.013
fruit}: conf = 0.137, sup = 0.014
                                       {tropical fruit} ---> {brown bread}:
                                       conf = 0.102, sup = 0.011
{tropical fruit} ---> {shopping
                                       {brown bread} ---> {tropical fruit}:
bags}: conf = 0.129, sup = 0.014
{cream cheese} ---> {other
                                       conf = 0.165, sup = 0.011
vegetables): conf = 0.346, sup =
                                       {brown bread} ---> {yogurt}: conf =
0.014
                                       0.224, \sup = 0.015
{frankfurter} ---> {yogurt}: conf =
                                       {yogurt} ---> {brown bread}: conf =
0.19, \sup = 0.011
                                       0.104, \sup = 0.015
```

```
{root vegetables} ---> {pip fruit}:
                                       {brown bread} ---> {whole milk}:
                                       conf = 0.389, sup = 0.025
conf = 0.143, sup = 0.016
{pip fruit} ---> {root vegetables}:
                                       {brown bread} ---> {root
conf = 0.206, sup = 0.016
                                       vegetables}: conf = 0.157, sup =
{tropical fruit} ---> {whipped/sour
                                       0.01
cream): conf = 0.132, sup = 0.014
                                       {domestic eggs} ---> {tropical
{whipped/sour cream} ---> {tropical
                                       fruit}: conf = 0.179, sup = 0.011
fruit}: conf = 0.193, sup = 0.014
                                       {tropical fruit} ---> {domestic
{yogurt} ---> {whipped/sour cream}:
                                       eggs\}: conf = 0.109, sup = 0.011
conf = 0.149, sup = 0.021
                                       {domestic eggs} ---> {yogurt}: conf
{whipped/sour cream} ---> {yogurt}:
                                       = 0.226, \sup = 0.014
conf = 0.289, sup = 0.021
                                       {yogurt} ---> {domestic eggs}: conf
{sliced cheese} ---> {whole milk}:
                                       = 0.103, \sup = 0.014
conf = 0.44, sup = 0.011
                                       {domestic eggs} ---> {whole milk}:
{shopping bags} ---> {bottled
                                       conf = 0.473, sup = 0.03
water\}: conf = 0.111, sup = 0.011
                                       {whole milk} ---> {domestic eggs}:
{white bread} ---> {whole milk}:
                                       conf = 0.117, sup = 0.03
conf = 0.406, sup = 0.017
                                       {domestic eggs} ---> {soda}: conf =
{frozen vegetables} ---> {yogurt}:
                                       0.196, \sup = 0.012
conf = 0.258, sup = 0.012
                                       {domestic eggs} ---> {root
                                       vegetables): conf = 0.226, sup =
{other vegetables} ---> {yogurt}:
conf = 0.224, sup = 0.043
                                       0.014
{yogurt} ---> {other vegetables}:
                                       {root vegetables} ---> {domestic
conf = 0.311, sup = 0.043
                                       eggs\}: conf = 0.132, sup = 0.014
{citrus fruit} ---> {rolls/buns}:
                                       {canned beer} ---> {rolls/buns}:
conf = 0.203, sup = 0.017
                                       conf = 0.145, sup = 0.011
{other vegetables} ---> {pip fruit}:
                                       {rolls/buns} ---> {shopping bags}:
conf = 0.135, sup = 0.026
                                       conf = 0.106, sup = 0.02
{pip fruit} ---> {other vegetables}:
                                       {shopping bags} ---> {rolls/buns}:
conf = 0.345, sup = 0.026
                                       conf = 0.198, sup = 0.02
{citrus fruit} ---> {pip fruit}:
                                       {shopping bags} ---> {sausage}:
conf = 0.167, sup = 0.014
                                       conf = 0.159, sup = 0.016
{pip fruit} ---> {citrus fruit}:
                                       {sausage} ---> {shopping bags}:
conf = 0.183, sup = 0.014
                                       conf = 0.167, sup = 0.016
{citrus fruit} ---> {fruit/vegetable
                                       {dessert} ---> {whole milk}: conf =
juice}: conf = 0.125, sup = 0.01
                                       0.37, \sup = 0.014
{fruit/vegetable juice} ---> {citrus
                                       {dessert} ---> {other vegetables}:
fruit}: conf = 0.143, sup = 0.01
                                       conf = 0.312, sup = 0.012
{citrus fruit} ---> {sausage}: conf
                                       {soda} ---> {pastry}: conf = 0.121,
= 0.136, \sup = 0.011
                                       sup = 0.021
{sausage} ---> {citrus fruit}: conf
                                       \{pastry\} ---> \{soda\}: conf = 0.237,
= 0.12, \sup = 0.011
                                       sup = 0.021
{tropical fruit} ---> {sausage}:
                                       {soda} ---> {whole milk}: conf =
conf = 0.133, sup = 0.014
                                       0.23, \sup = 0.04
```

```
{sausage} ---> {tropical fruit}:
                                       {whole milk} ---> {soda}: conf =
conf = 0.148, sup = 0.014
                                       0.157, \sup = 0.04
{pip fruit} ---> {sausage}: conf =
                                       {other vegetables} ---> {soda}:
0.142, \sup = 0.011
                                       conf = 0.169, sup = 0.033
{sausage} ---> {pip fruit}: conf =
                                       {soda} ---> {other vegetables}:
0.115, \sup = 0.011
                                       conf = 0.188, sup = 0.033
                                       {berries} ---> {whole milk}: conf =
{hygiene articles} ---> {whole
milk: conf = 0.389, sup = 0.013
                                       0.355, \sup = 0.012
{hard cheese} ---> {whole milk}:
                                       {berries} ---> {other vegetables}:
conf = 0.411, sup = 0.01
                                       conf = 0.309, sup = 0.01
{coffee} ---> {other vegetables}:
                                       {pork} ---> {whole milk}: conf =
conf = 0.231, sup = 0.013
                                       0.384, sup = 0.022
{other vegetables} ---> {pastry}:
                                       {other vegetables} ---> {pork}:
conf = 0.117, sup = 0.023
                                       conf = 0.112, sup = 0.022
{pastry} ---> {other vegetables}:
                                       {pork} ---> {other vegetables}:
conf = 0.254, sup = 0.023
                                       conf = 0.376, sup = 0.022
{shopping bags} ---> {other
                                       \{pork\} ---> \{soda\}: conf = 0.206,
vegetables): conf = 0.235, sup =
                                       sup = 0.012
0.023
                                       {whole milk} ---> {whipped/sour
{other vegetables} ---> {shopping
                                       cream\}: conf = 0.126, sup = 0.032
bags}: conf = 0.12, sup = 0.023
                                       {whipped/sour cream} ---> {whole
{shopping bags} ---> {pastry}: conf
                                      milk\}: conf = 0.45, sup = 0.032
= 0.121, \sup = 0.012
                                       {other vegetables} --->
{pastry} ---> {shopping bags}: conf
                                       {whipped/sour cream}: conf = 0.149,
= 0.134, \sup = 0.012
                                       sup = 0.029
{cream cheese} ---> {whole milk}:
                                       {whipped/sour cream} ---> {other
conf = 0.415, sup = 0.016
                                       vegetables): conf = 0.403, sup =
                                       0.029
{hamburger meat} ---> {whole milk}:
conf = 0.443, sup = 0.015
                                       {whipped/sour cream} ---> {soda}:
{margarine} ---> {bottled water}:
                                       conf = 0.162, sup = 0.012
conf = 0.175, sup = 0.01
                                       {sugar} ---> {whole milk}: conf =
{frankfurter} ---> {other
                                       0.444, \sup = 0.015
vegetables): conf = 0.279, sup =
                                       {sugar} ---> {other vegetables}:
0.016
                                       conf = 0.318, sup = 0.011
{frankfurter} ---> {root
                                       {root vegetables} ---> {whole milk}:
vegetables): conf = 0.172, sup =
                                       conf = 0.449, sup = 0.049
0.01
                                       {whole milk} ---> {root vegetables}:
                                       conf = 0.191, sup = 0.049
{other vegetables} ---> {sausage}:
conf = 0.139, sup = 0.027
                                       {rolls/buns} ---> {bottled water}:
{sausage} ---> {other vegetables}:
                                       conf = 0.132, sup = 0.024
conf = 0.287, sup = 0.027
                                       {bottled water} ---> {rolls/buns}:
{frankfurter} ---> {sausage}: conf
                                       conf = 0.219, sup = 0.024
= 0.171, sup = 0.01
```

```
{sausage} ---> {frankfurter}: conf
                                       {hamburger meat} ---> {other
= 0.107, \sup = 0.01
                                       vegetables): conf = 0.416, sup =
{root vegetables} ---> {beef}: conf
                                       0.014
= 0.16, \sup = 0.017
                                       {napkins} ---> {other vegetables}:
{beef} ---> {root vegetables}: conf
                                       conf = 0.276, sup = 0.014
= 0.331, \sup = 0.017
                                       {napkins} ---> {rolls/buns}: conf =
{bottled beer} ---> {whole milk}:
                                       0.223, \sup = 0.012
conf = 0.254, sup = 0.02
                                       {soda} ---> {fruit/vegetable juice}:
{fruit/vegetable juice} --->
                                       conf = 0.106, sup = 0.018
                                       {fruit/vegetable juice} ---> {soda}:
{yogurt}: conf = 0.259, sup = 0.019
{yogurt} ---> {fruit/vegetable
                                       conf = 0.255, sup = 0.018
juice}: conf = 0.134, sup = 0.019
                                       {newspapers} ---> {soda}: conf =
{shopping bags} ---> {yogurt}: conf
                                       0.183, \sup = 0.015
= 0.155, \sup = 0.015
                                       {canned beer} ---> {soda}: conf =
{yogurt} ---> {shopping bags}: conf
                                       0.178, \sup = 0.014
= 0.109, \sup = 0.015
                                       {brown bread} ---> {soda}: conf =
{shopping bags} ---> {whole milk}:
                                       0.194, \sup = 0.013
conf = 0.249, sup = 0.025
                                       {shopping bags} ---> {soda}: conf =
{napkins} ---> {yogurt}: conf =
                                       0.25, \sup = 0.025
0.235, \sup = 0.012
                                       {soda} ---> {shopping bags}: conf =
{napkins} ---> {whole milk}: conf =
                                       0.141, \sup = 0.025
0.377, \sup = 0.02
                                       {shopping bags} --->
{pork} ---> {rolls/buns}: conf =
                                       {fruit/vegetable juice}: conf =
0.196, \sup = 0.011
                                       0.108, \sup = 0.011
{citrus fruit} ---> {other
                                       {fruit/vegetable juice} --->
vegetables): conf = 0.349, sup =
                                       {shopping bags}: conf = 0.148, sup
                                       = 0.011
{other vegetables} ---> {citrus
                                       {shopping bags} ---> {canned beer}:
fruit}: conf = 0.149, sup = 0.029
                                       conf = 0.116, sup = 0.011
{chicken} ---> {other vegetables}:
                                       {canned beer} ---> {shopping bags}:
conf = 0.417, sup = 0.018
                                       conf = 0.147, sup = 0.011
{citrus fruit} ---> {root
                                       {chocolate} ---> {rolls/buns}: conf
vegetables): conf = 0.214, sup =
                                       = 0.238, \sup = 0.012
0.018
                                       {chocolate} ---> {soda}: conf =
{root vegetables} ---> {citrus
                                       0.273, \sup = 0.014
fruit}: conf = 0.162, sup = 0.018
                                       {rolls/buns} ---> {sausage}: conf =
                                       0.166, \sup = 0.031
{chicken} ---> {root vegetables}:
conf = 0.254, sup = 0.011
                                       {sausage} ---> {rolls/buns}: conf =
{fruit/vegetable juice} --->
                                       0.326, \sup = 0.031
{sausage}: conf = 0.139, sup = 0.01
                                       {soda} ---> {sausage}: conf =
{sausage} ---> {fruit/vegetable
                                       0.139, sup = 0.024
juice}: conf = 0.107, sup = 0.01
                                       {sausage} \longrightarrow {soda}: conf =
{brown bread} ---> {sausage}: conf
                                       0.259, \sup = 0.024
= 0.165, \sup = 0.011
```

```
{sausage} ---> {brown bread}: conf
                                       {rolls/buns} ---> {tropical fruit}:
= 0.114, \sup = 0.011
                                       conf = 0.134, sup = 0.025
{citrus fruit} ---> {whipped/sour
                                       {tropical fruit} ---> {rolls/buns}:
cream\}: conf = 0.131, sup = 0.011
                                       conf = 0.234, sup = 0.025
{whipped/sour cream} ---> {citrus
                                       {root vegetables} ---> {tropical
fruit}: conf = 0.152, sup = 0.011
                                       fruit}: conf = 0.193, sup = 0.021
{sausage} ---> {yogurt}: conf =
                                       {tropical fruit} ---> {root
0.209, \sup = 0.02
                                       vegetables): conf = 0.201, sup =
{yoqurt} ---> {sausage}: conf =
                                       0.021
0.141, \sup = 0.02
                                       {root vegetables} ---> {other
{root vegetables} ---> {sausage}:
                                       vegetables}: conf = 0.435, sup =
conf = 0.137, sup = 0.015
                                       0.047
                                       {other vegetables} ---> {root
{sausage} ---> {root vegetables}:
conf = 0.159, sup = 0.015
                                      vegetables): conf = 0.245, sup =
{margarine} ---> {rolls/buns}: conf
                                      0.047
= 0.252, \sup = 0.015
                                       {rolls/buns} ---> {root vegetables}:
{fruit/vegetable juice} ---> {whole
                                      conf = 0.132, sup = 0.024
milk: conf = 0.368, sup = 0.027
                                       {root vegetables} ---> {rolls/buns}:
{whole milk} ---> {fruit/vegetable
                                      conf = 0.223, sup = 0.024
juice}: conf = 0.104, sup = 0.027
                                       {salty snack} ---> {other
{fruit/vegetable juice} --->
                                       vegetables): conf = 0.285, sup =
                                      0.011
{rolls/buns}: conf = 0.201, sup =
0.015
                                       {waffles} ---> {other vegetables}:
{root vegetables} ---> {margarine}:
                                       conf = 0.262, sup = 0.01
conf = 0.102, sup = 0.011
                                       {tropical fruit} ---> {newspapers}:
{margarine} ---> {root vegetables}:
                                       conf = 0.112, sup = 0.012
conf = 0.189, sup = 0.011
                                       {newspapers} ---> {tropical fruit}:
{root vegetables} --->
                                       conf = 0.148, sup = 0.012
{fruit/vegetable juice}: conf =
                                       {rolls/buns} ---> {frankfurter}:
0.11, \sup = 0.012
                                       conf = 0.104, sup = 0.019
{fruit/vegetable juice} ---> {root
                                       {frankfurter} ---> {rolls/buns}:
vegetables}: conf = 0.166, sup =
                                       conf = 0.326, sup = 0.019
0.012
                                       {rolls/buns} ---> {soda}: conf =
{domestic eggs} ---> {rolls/buns}:
                                       0.208, \sup = 0.038
conf = 0.247, sup = 0.016
                                       {soda} ---> {rolls/buns}: conf =
{frozen vegetables} --->
                                       0.22, \sup = 0.038
{rolls/buns}: conf = 0.211, sup =
                                       {frankfurter} ---> {soda}: conf =
                                       0.191, \sup = 0.011
0.01
                                       {citrus fruit} ---> {tropical
{root vegetables} ---> {frozen
vegetables): conf = 0.106, sup =
                                      fruit}: conf = 0.241, sup = 0.02
0.012
                                       {tropical fruit} ---> {citrus
{frozen vegetables} ---> {root
                                       fruit}: conf = 0.19, sup = 0.02
vegetables): conf = 0.241, sup =
                                       {citrus fruit} ---> {yogurt}: conf
0.012
                                      = 0.262, \sup = 0.022
```

```
{bottled beer} ---> {soda}: conf =
                                       {yogurt} ---> {citrus fruit}: conf
0.211, \sup = 0.017
                                       = 0.155, \sup = 0.022
{bottled beer} ---> {bottled water}:
                                       {citrus fruit} ---> {whole milk}:
conf = 0.196, sup = 0.016
                                       conf = 0.369, sup = 0.031
{bottled water} ---> {bottled beer}:
                                       {whole milk} ---> {citrus fruit}:
conf = 0.143, sup = 0.016
                                       conf = 0.119, sup = 0.031
                                       {tropical fruit} ---> {whole milk}:
{fruit/vegetable juice} --->
{bottled water}: conf = 0.197, sup
                                       conf = 0.403, sup = 0.042
= 0.014
                                       {whole milk} ---> {tropical fruit}:
{bottled water} --->
                                       conf = 0.166, sup = 0.042
{fruit/vegetable juice}: conf =
                                       {citrus fruit} ---> {bottled water}:
0.129, \sup = 0.014
                                       conf = 0.163, sup = 0.014
{butter milk} ---> {whole milk}:
                                       {bottled water} ---> {citrus fruit}:
conf = 0.415, sup = 0.012
                                       conf = 0.122, sup = 0.014
{frankfurter} ---> {whole milk}:
                                       {bottled water} ---> {yogurt}: conf
conf = 0.348, sup = 0.021
                                       = 0.208, \sup = 0.023
{newspapers} ---> {whole milk}:
                                       {yogurt} ---> {bottled water}: conf
conf = 0.343, sup = 0.027
                                       = 0.165, \sup = 0.023
{whole milk} ---> {newspapers}:
                                       {bottled water} ---> {whole milk}:
conf = 0.107, sup = 0.027
                                       conf = 0.311, sup = 0.034
{domestic eggs} ---> {citrus fruit}:
                                       {whole milk} ---> {bottled water}:
conf = 0.163, sup = 0.01
                                       conf = 0.135, sup = 0.034
{citrus fruit} ---> {domestic eggs}:
                                       {curd} ---> {tropical fruit}: conf
conf = 0.125, sup = 0.01
                                       = 0.193, \sup = 0.01
{oil} ---> {whole milk}: conf =
                                       \{\text{curd}\} \longrightarrow \{\text{yogurt}\}: \text{conf} = 0.324,
0.402, \sup = 0.011
                                       sup = 0.017
{margarine} ---> {whole milk}: conf
                                       {yogurt} ---> {curd}: conf = 0.124,
= 0.413, \sup = 0.024
                                       sup = 0.017
{tropical fruit} ---> {pip fruit}:
                                       {curd} ---> {whole milk}: conf =
conf = 0.195, sup = 0.02
                                       0.49, \sup = 0.026
                                       {whole milk} ---> {curd}: conf =
{pip fruit} ---> {tropical fruit}:
conf = 0.27, sup = 0.02
                                       0.102, \sup = 0.026
{pip fruit} ---> {whole milk}: conf
                                       {other vegetables} ---> {tropical
= 0.398, \sup = 0.03
                                       fruit}: conf = 0.185, sup = 0.036
{whole milk} ---> {pip fruit}: conf
                                       {tropical fruit} ---> {other
= 0.118, sup = 0.03
                                       vegetables): conf = 0.342, sup =
{rolls/buns} ---> {whole milk}:
                                       0.036
                                       {tropical fruit} ---> {bottled
conf = 0.308, sup = 0.057
{whole milk} ---> {rolls/buns}:
                                       water\}: conf = 0.176, sup = 0.019
conf = 0.222, sup = 0.057
                                       {bottled water} ---> {tropical
{pip fruit} ---> {rolls/buns}: conf
                                       fruit}: conf = 0.167, sup = 0.019
= 0.184, \sup = 0.014
                                       {other vegetables} ---> {bottled
{chocolate} ---> {whole milk}: conf
                                       water\}: conf = 0.128, sup = 0.025
= 0.336, \sup = 0.017
```

```
{brown bread} ---> {rolls/buns}:
                                       {bottled water} ---> {other
conf = 0.194, sup = 0.013
                                       vegetables): conf = 0.224, sup =
{beef} ---> {whole milk}: conf =
                                       0.025
0.405, \sup = 0.021
                                       {chocolate} ---> {other vegetables}:
{sausage} ---> {whole milk}: conf =
                                       conf = 0.256, sup = 0.013
0.318, \sup = 0.03
                                       {white bread} ---> {other
{whole milk} ---> {sausage}: conf =
                                       vegetables): conf = 0.326, sup =
0.117, \sup = 0.03
                                       0.014
{pastry} ---> {sausage}: conf =
                                       {rolls/buns} ---> {other
0.141, \sup = 0.013
                                       vegetables): conf = 0.232, sup =
{sausage} ---> {pastry}: conf =
                                       0.043
0.133, \sup = 0.013
                                       {other vegetables} --->
{salty snack} ---> {whole milk}:
                                       {rolls/buns}: conf = 0.22, sup =
conf = 0.296, sup = 0.011
                                       0.043
{frozen vegetables} ---> {whole
                                       {bottled beer} ---> {other
milk: conf = 0.425, sup = 0.02
                                       vegetables): conf = 0.201, sup =
{frozen vegetables} ---> {other
                                       0.016
vegetables): conf = 0.37, sup =
                                       {bottled beer} ---> {rolls/buns}:
0.018
                                       conf = 0.169, sup = 0.014
{rolls/buns} ---> {pastry}: conf =
                                       {whole milk} ---> {yogurt}: conf =
0.114, \sup = 0.021
                                       0.219, \sup = 0.056
{pastry} ---> {rolls/buns}: conf =
                                       {yogurt} ---> {whole milk}: conf =
0.235, \sup = 0.021
                                       0.402, \sup = 0.056
{beef} ---> {rolls/buns}: conf =
                                       {butter} ---> {yogurt}: conf =
0.26, \sup = 0.014
                                       0.264, \sup = 0.015
{other vegetables} ---> {margarine}:
                                       {yogurt} ---> {butter}: conf =
conf = 0.102, sup = 0.02
                                       0.105, \sup = 0.015
{margarine} ---> {other vegetables}:
                                       {butter} ---> {whole milk}: conf =
conf = 0.337, sup = 0.02
                                       0.497, \sup = 0.028
{tropical fruit} --->
                                       {whole milk} ---> {butter}: conf =
                                       0.108, \sup = 0.028
{fruit/vegetable juice}: conf =
0.131, \sup = 0.014
                                       {long life bakery product} --->
{fruit/vegetable juice} --->
                                       {whole milk}: conf = 0.361, sup =
{tropical fruit}: conf = 0.19, sup
                                       0.014
= 0.014
                                       {other vegetables} ---> {whole
{other vegetables} --->
                                       milk: conf = 0.387, sup = 0.075
{fruit/vegetable juice}: conf =
                                       {whole milk} ---> {other
0.109, \sup = 0.021
                                       vegetables): conf = 0.293, sup =
{fruit/vegetable juice} ---> {other
                                       0.075
vegetables): conf = 0.291, sup =
                                       {long life bakery product} --->
0.021
                                       {other vegetables}: conf = 0.285,
                                       sup = 0.011
{brown bread} ---> {other
vegetables): conf = 0.288, sup =
                                       {cream cheese} ---> {yogurt}: conf
0.019
                                       = 0.313, \sup = 0.012
```

```
{pip fruit} ---> {yogurt}: conf =
{domestic eggs} ---> {other
vegetables): conf = 0.351, sup =
                                       0.238, sup = 0.018
0.022
                                       {yogurt} ---> {pip fruit}: conf =
{other vegetables} ---> {domestic
                                       0.129, \sup = 0.018
eggs\}: conf = 0.115, sup = 0.022
                                       {tropical fruit} ---> {yogurt}:
{ham} ---> {whole milk}: conf =
                                       conf = 0.279, sup = 0.029
0.441, sup = 0.011
                                       {yogurt} ---> {tropical fruit}:
{other vegetables} ---> {butter}:
                                       conf = 0.21, sup = 0.029
conf = 0.104, sup = 0.02
                                       {pastry, other vegetables} --->
{butter} ---> {other vegetables}:
                                       \{whole milk\}: conf = 0.468, sup =
conf = 0.361, sup = 0.02
                                       0.011
{butter} ---> {rolls/buns}: conf =
                                       {whole milk, other vegetables} --->
0.242, \sup = 0.013
                                       \{pastry\}: conf = 0.141, sup = 0.011
{curd} ---> {other vegetables}:
                                       {whole milk, pastry} ---> {other
conf = 0.323, sup = 0.017
                                       vegetables): conf = 0.318, sup =
{curd} ---> {rolls/buns}: conf =
                                       0.011
                                       {pastry} ---> {whole milk, other
0.189, \sup = 0.01
{root vegetables} ---> {butter}:
                                       vegetables): conf = 0.119, sup =
conf = 0.118, sup = 0.013
                                       0.011
{butter} ---> {root vegetables}:
                                       {other vegetables, rolls/buns} --->
conf = 0.233, sup = 0.013
                                       {yogurt}: conf = 0.27, sup = 0.011
{root vegetables} ---> {bottled
                                       {yogurt, rolls/buns} ---> {other
water\}: conf = 0.144, sup = 0.016
                                       vegetables): conf = 0.334, sup =
{bottled water} ---> {root
                                       0.011
vegetables}: conf = 0.142, sup =
                                       {yogurt, other vegetables} --->
                                       {rolls/buns}: conf = 0.265, sup =
0 016
{curd} ---> {root vegetables}: conf
= 0.204, \sup = 0.011
                                       {bottled water, other vegetables} --
{butter} ---> {whipped/sour cream}:
                                       \rightarrow {whole milk}: conf = 0.434, sup
conf = 0.183, sup = 0.01
                                       = 0.011
{whipped/sour cream} ---> {butter}:
                                       {whole milk, other vegetables} --->
conf = 0.142, sup = 0.01
                                       {bottled water}: conf = 0.144, sup
{whipped/sour cream} --->
                                       = 0.011
                                       {whole milk, bottled water} --->
{rolls/buns}: conf = 0.204, sup =
0.015
                                       {other vegetables}: conf = 0.314,
{curd} ---> {whipped/sour cream}:
                                       sup = 0.011
conf = 0.197, sup = 0.01
                                       {whole milk, rolls/buns} --->
{whipped/sour cream} ---> {curd}:
                                       {yogurt}: conf = 0.275, sup = 0.016
conf = 0.146, sup = 0.01
                                       {yogurt, rolls/buns} ---> {whole
{root vegetables} ---> {whipped/sour
                                      milk\}: conf = 0.453, sup = 0.016
cream\}: conf = 0.157, sup = 0.017
                                       {yogurt, whole milk} --->
{whipped/sour cream} ---> {root
                                       {rolls/buns}: conf = 0.278, sup =
vegetables): conf = 0.238, sup =
                                       0.016
0.017
```

```
{rolls/buns} ---> {yogurt}: conf =
                                       {yogurt} ---> {whole milk,
0.187, \sup = 0.034
                                       rolls/buns}: conf = 0.112, sup =
{yogurt} ---> {rolls/buns}: conf =
                                       0.016
0.246, \sup = 0.034
                                       {other vegetables, citrus fruit} --
{soda} ---> {bottled water}: conf =
                                       \rightarrow {whole milk}: conf = 0.451, sup
0.166, \sup = 0.029
                                       = 0.013
{bottled water} ---> {soda}: conf =
                                       {whole milk, citrus fruit} --->
0.262, \sup = 0.029
                                       {other vegetables}: conf = 0.427,
{newspapers} ---> {yoqurt}: conf =
                                       sup = 0.013
0.192, \sup = 0.015
                                       {whole milk, other vegetables} --->
{yogurt} ---> {newspapers}: conf =
                                       {citrus fruit}: conf = 0.174, sup =
0.11, \sup = 0.015
                                       0.013
{rolls/buns} ---> {newspapers}:
                                       {citrus fruit} ---> {whole milk,
conf = 0.107, sup = 0.02
                                       other vegetables}: conf = 0.157,
                                       sup = 0.013
{newspapers} ---> {rolls/buns}:
conf = 0.247, sup = 0.02
                                       {sausage, other vegetables} --->
{newspapers} ---> {bottled water}:
                                       {whole milk}: conf = 0.377, sup =
conf = 0.141, sup = 0.011
                                       0.01
{bottled water} ---> {newspapers}:
                                       {whole milk, other vegetables} --->
conf = 0.102, sup = 0.011
                                       \{\text{sausage}\}: \text{conf} = 0.136, \text{sup} = 0.01
{berries} ---> {yogurt}: conf =
                                       {whole milk, sausage} ---> {other
0.318, \sup = 0.011
                                       vegetables): conf = 0.34, sup =
{coffee} ---> {whole milk}: conf =
                                       0.01
0.322, \sup = 0.019
                                       {sausage} ---> {whole milk, other
{tropical fruit} ---> {soda}: conf
                                       vegetables): conf = 0.108, sup =
= 0.199, \sup = 0.021
                                       0.01
{soda} ---> {tropical fruit}: conf
                                       {butter, other vegetables} --->
= 0.12, \sup = 0.021
                                       {whole milk}: conf = 0.574, sup =
{soda} \longrightarrow {yogurt}: conf = 0.157,
                                       0.011
sup = 0.027
                                       {whole milk, other vegetables} --->
{yogurt} ---> {soda}: conf = 0.196,
                                       {butter}: conf = 0.154, sup = 0.011
sup = 0.027
                                       {whole milk, butter} ---> {other
{tropical fruit} ---> {pastry}:
                                       vegetables): conf = 0.417, sup =
conf = 0.126, sup = 0.013
                                       0.011
{pastry} ---> {tropical fruit}:
                                       {butter} ---> {whole milk, other
conf = 0.149, sup = 0.013
                                       vegetables): conf = 0.207, sup =
{pastry} ---> {yogurt}: conf =
                                       0.011
0.199, \sup = 0.018
                                       {other vegetables, tropical fruit} -
{yogurt} ---> {pastry}: conf =
                                       --> {yogurt}: conf = 0.343, sup =
0.127, \sup = 0.018
                                       0.012
{pastry} ---> {whole milk}: conf =
                                       {yogurt, other vegetables} --->
0.374, \sup = 0.033
                                       {tropical fruit}: conf = 0.283, sup
                                       = 0.012
{whole milk} ---> {pastry}: conf =
0.13, \sup = 0.033
```

```
{root vegetables} ---> {yogurt}:
                                       {yogurt, tropical fruit} ---> {other
conf = 0.237, sup = 0.026
                                       vegetables}: conf = 0.42, sup =
{yogurt} ---> {root vegetables}:
                                       0.012
conf = 0.185, sup = 0.026
                                       {tropical fruit} ---> {yogurt, other
{root vegetables} ---> {soda}: conf
                                      vegetables): conf = 0.117, sup =
= 0.171, \sup = 0.019
                                       0.012
{soda} ---> {root vegetables}: conf
                                       {whipped/sour cream, other
= 0.107, \sup = 0.019
                                       vegetables} ---> {yogurt}: conf =
{root vegetables} ---> {pastry}:
                                       0.352, \sup = 0.01
conf = 0.101, sup = 0.011
                                       {yogurt, other vegetables} --->
{pastry} ---> {root vegetables}:
                                       {whipped/sour cream}: conf = 0.234,
conf = 0.123, sup = 0.011
                                       sup = 0.01
{waffles} ---> {whole milk}: conf =
                                       {yogurt, whipped/sour cream} --->
0.331, \sup = 0.013
                                       {other vegetables}: conf = 0.49,
                                      sup = 0.01
{tropical fruit} ---> {brown bread}:
conf = 0.102, sup = 0.011
                                       {whipped/sour cream} ---> {yogurt,
{brown bread} ---> {tropical fruit}:
                                      other vegetables}: conf = 0.142,
conf = 0.165, sup = 0.011
                                      sup = 0.01
{brown bread} ---> {yogurt}: conf =
                                       {yogurt, whole milk} --->
0.224, \sup = 0.015
                                       {whipped/sour cream}: conf = 0.194,
                                       sup = 0.011
{yogurt} ---> {brown bread}: conf =
                                       {whipped/sour cream, yogurt} --->
0.104, \sup = 0.015
{brown bread} ---> {whole milk}:
                                       {whole milk}: conf = 0.525, sup =
conf = 0.389, sup = 0.025
                                       0.011
{brown bread} ---> {root
                                       {whipped/sour cream, whole milk} --
vegetables): conf = 0.157, sup =
                                      -> {yogurt}: conf = 0.338, sup =
{domestic eggs} ---> {tropical
                                       {whipped/sour cream} ---> {yogurt,
fruit}: conf = 0.179, sup = 0.011
                                       whole milk}: conf = 0.152, sup =
{tropical fruit} ---> {domestic
                                      0.011
eggs\}: conf = 0.109, sup = 0.011
                                       {other vegetables, tropical fruit} -
{domestic eggs} ---> {yogurt}: conf
                                      --> {whole milk}: conf = 0.476, sup
= 0.226, \sup = 0.014
                                       = 0.017
{yogurt} ---> {domestic eggs}: conf
                                       {whole milk, other vegetables} --->
= 0.103, \sup = 0.014
                                       {tropical fruit}: conf = 0.228, sup
{domestic eggs} ---> {whole milk}:
                                       = 0.017
conf = 0.473, sup = 0.03
                                       {whole milk, tropical fruit} --->
{whole milk} ---> {domestic eggs}:
                                       {other vegetables}: conf = 0.404,
conf = 0.117, sup = 0.03
                                       sup = 0.017
                                      {tropical fruit} ---> {whole milk,
{domestic eggs} ---> {soda}: conf =
0.196, \sup = 0.012
                                      other vegetables}: conf = 0.163,
{domestic eggs} ---> {root
                                      sup = 0.017
vegetables): conf = 0.226, sup =
0.014
```

```
{root vegetables} ---> {domestic
                                       {fruit/vegetable juice, other
                                       vegetables} ---> {whole milk}: conf
eggs}: conf = 0.132, sup = 0.014
{canned beer} ---> {rolls/buns}:
                                       = 0.498, \sup = 0.01
conf = 0.145, sup = 0.011
                                       {whole milk, other vegetables} --->
{rolls/buns} ---> {shopping bags}:
                                       {fruit/vegetable juice}: conf =
conf = 0.106, sup = 0.02
                                       0.14, \sup = 0.01
{shopping bags} ---> {rolls/buns}:
                                       {whole milk, fruit/vegetable juice}
conf = 0.198, sup = 0.02
                                       ---> {other vegetables}: conf =
{shopping bags} ---> {sausage}:
                                       0.393, \sup = 0.01
conf = 0.159, sup = 0.016
                                       {fruit/vegetable juice} ---> {whole
{sausage} ---> {shopping bags}:
                                       milk, other vegetables}: conf =
conf = 0.167, sup = 0.016
                                       0.145, \sup = 0.01
{dessert} ---> {whole milk}: conf =
                                       {whole milk, other vegetables} --->
0.37, \sup = 0.014
                                       {yoqurt}: conf = 0.298, sup = 0.022
{dessert} ---> {other vegetables}:
                                       {yogurt, other vegetables} --->
conf = 0.312, sup = 0.012
                                       \{\text{whole milk}\}: \text{conf} = 0.513, \text{sup} =
{soda} ---> {pastry}: conf = 0.121,
                                       0.022
sup = 0.021
                                       {yogurt, whole milk} ---> {other
\{pastry\} ---> \{soda\}: conf = 0.237,
                                       vegetables): conf = 0.397, sup =
sup = 0.021
                                       0.022
{soda} ---> {whole milk}: conf =
                                       {other vegetables} ---> {yogurt,
0.23, \sup = 0.04
                                       whole milk): conf = 0.115, sup =
{whole milk} ---> {soda}: conf =
                                       0.022
0.157, \sup = 0.04
                                       {yogurt} ---> {whole milk, other
{other vegetables} ---> {soda}:
                                       vegetables): conf = 0.16, sup =
conf = 0.169, sup = 0.033
                                       0.022
{soda} ---> {other vegetables}:
                                       {other vegetables, root vegetables}
conf = 0.188, sup = 0.033
                                       ---> {yogurt}: conf = 0.273, sup =
{berries} ---> {whole milk}: conf =
                                       0.013
0.355, \sup = 0.012
                                       {yogurt, other vegetables} --->
{berries} ---> {other vegetables}:
                                       {root vegetables}: conf = 0.297,
conf = 0.309, sup = 0.01
                                       sup = 0.013
{pork} ---> {whole milk}: conf =
                                       {yogurt, root vegetables} --->
0.384, sup = 0.022
                                       {other vegetables}: conf = 0.5, sup
{other vegetables} ---> {pork}:
                                       = 0.013
conf = 0.112, sup = 0.022
                                       {root vegetables} ---> {yogurt,
{pork} ---> {other vegetables}:
                                       other vegetables}: conf = 0.118,
                                       sup = 0.013
conf = 0.376, sup = 0.022
\{pork\} ---> \{soda\}: conf = 0.206,
                                       {pip fruit, other vegetables} --->
sup = 0.012
                                       {whole milk}: conf = 0.518, sup =
{whole milk} ---> {whipped/sour
                                       0.014
cream\}: conf = 0.126, sup = 0.032
                                       {whole milk, other vegetables} --->
{whipped/sour cream} ---> {whole
                                       {pip fruit}: conf = 0.181, sup =
milk: conf = 0.45, sup = 0.032
                                       0.014
```

```
{other vegetables} --->
                                       {whole milk, pip fruit} ---> {other
{whipped/sour cream}: conf = 0.149,
                                       vegetables}: conf = 0.449, sup =
                                       0.014
sup = 0.029
{whipped/sour cream} ---> {other
                                       {pip fruit} ---> {whole milk, other
vegetables): conf = 0.403, sup =
                                       vegetables): conf = 0.179, sup =
0.029
                                       0.014
{whipped/sour cream} ---> {soda}:
                                       {other vegetables, domestic eggs} --
conf = 0.162, sup = 0.012
                                       \rightarrow {whole milk}: conf = 0.553, sup
{sugar} ---> {whole milk}: conf =
                                       = 0.012
0.444, \sup = 0.015
                                       {whole milk, domestic eggs} --->
{sugar} ---> {other vegetables}:
                                       {other vegetables}: conf = 0.41,
conf = 0.318, sup = 0.011
                                       sup = 0.012
{root vegetables} ---> {whole milk}:
                                       {whole milk, other vegetables} --->
conf = 0.449, sup = 0.049
                                       {domestic eggs}: conf = 0.164, sup
{whole milk} ---> {root vegetables}:
                                       = 0.012
conf = 0.191, sup = 0.049
                                       {domestic eggs} ---> {whole milk,
{rolls/buns} ---> {bottled water}:
                                       other vegetables}: conf = 0.194,
conf = 0.132, sup = 0.024
                                       sup = 0.012
                                       {other vegetables, citrus fruit} --
{bottled water} ---> {rolls/buns}:
conf = 0.219, sup = 0.024
                                       -> {root vegetables}: conf = 0.359,
                                       sup = 0.01
{hamburger meat} ---> {other
vegetables): conf = 0.416, sup =
                                       {root vegetables, citrus fruit} --->
0.014
                                       {other vegetables}: conf = 0.586,
{napkins} ---> {other vegetables}:
                                       sup = 0.01
conf = 0.276, sup = 0.014
                                       {other vegetables, root vegetables}
{napkins} ---> {rolls/buns}: conf =
                                       ---> {citrus fruit}: conf = 0.219,
0.223, \sup = 0.012
                                       sup = 0.01
                                       {citrus fruit} ---> {other
{soda} ---> {fruit/vegetable juice}:
conf = 0.106, sup = 0.018
                                       vegetables, root vegetables}: conf
{fruit/vegetable juice} ---> {soda}:
                                       = 0.125, \sup = 0.01
conf = 0.255, sup = 0.018
                                       {root vegetables, rolls/buns} --->
{newspapers} ---> {soda}: conf =
                                       {whole milk}: conf = 0.523, sup =
0.183, \sup = 0.015
                                       0.013
{canned beer} ---> {soda}: conf =
                                       {whole milk, rolls/buns} ---> {root
                                       vegetables}: conf = 0.224, sup =
0.178, \sup = 0.014
{brown bread} ---> {soda}: conf =
                                       0.013
0.194, \sup = 0.013
                                       {whole milk, root vegetables} --->
{shopping bags} ---> {soda}: conf =
                                       {rolls/buns}: conf = 0.26, sup =
0.25, \sup = 0.025
                                       0.013
{soda} ---> {shopping bags}: conf =
                                       {root vegetables} ---> {whole milk,
0.141, \sup = 0.025
                                       rolls/buns}: conf = 0.117, sup =
{shopping bags} --->
                                       0.013
{fruit/vegetable juice}: conf =
0.108, \sup = 0.011
```

```
{fruit/vegetable juice} --->
                                       {other vegetables, rolls/buns} --->
{shopping bags}: conf = 0.148, sup
                                       {whole milk}: conf = 0.42, sup =
= 0.011
                                       0.018
{shopping bags} ---> {canned beer}:
                                       {whole milk, rolls/buns} ---> {other
conf = 0.116, sup = 0.011
                                       vegetables): conf = 0.316, sup =
{canned beer} ---> {shopping bags}:
                                       0.018
conf = 0.147, sup = 0.011
                                       {whole milk, other vegetables} --->
{chocolate} ---> {rolls/buns}: conf
                                       {rolls/buns}: conf = 0.239, sup =
= 0.238, \sup = 0.012
                                       0.018
{chocolate} ---> {soda}: conf =
                                       {tropical fruit, rolls/buns} --->
0.273, \sup = 0.014
                                       {whole milk}: conf = 0.446, sup =
{rolls/buns} ---> {sausage}: conf =
                                       0.011
0.166, \sup = 0.031
                                       {whole milk, rolls/buns} --->
{sausage} ---> {rolls/buns}: conf =
                                       {tropical fruit}: conf = 0.194, sup
                                       = 0.011
0.326, \sup = 0.031
{soda} ---> {sausage}: conf =
                                       {whole milk, tropical fruit} --->
0.139, \sup = 0.024
                                       {rolls/buns}: conf = 0.26, sup =
{sausage} ---> {soda}: conf =
                                       0.011
0.259, \sup = 0.024
                                       {tropical fruit} ---> {whole milk,
{rolls/buns} ---> {tropical fruit}:
                                       rolls/buns}: conf = 0.105, sup =
conf = 0.134, sup = 0.025
                                       0.011
{tropical fruit} ---> {rolls/buns}:
                                       {root vegetables, tropical fruit} --
conf = 0.234, sup = 0.025
                                       \rightarrow {whole milk}: conf = 0.57, sup =
{root vegetables} ---> {tropical
                                       0.012
fruit}: conf = 0.193, sup = 0.021
                                       {whole milk, root vegetables} --->
{tropical fruit} ---> {root
                                       {tropical fruit}: conf = 0.245, sup
vegetables): conf = 0.201, sup =
0.021
                                       {whole milk, tropical fruit} --->
{root vegetables} ---> {other
                                       {root vegetables}: conf = 0.284,
vegetables): conf = 0.435, sup =
                                       sup = 0.012
0.047
                                       {root vegetables} ---> {whole milk,
{other vegetables} ---> {root
                                       tropical fruit}: conf = 0.11, sup =
vegetables): conf = 0.245, sup =
                                       0.012
0.047
                                       {tropical fruit} ---> {whole milk,
{rolls/buns} ---> {root vegetables}:
                                       root vegetables}: conf = 0.114, sup
conf = 0.132, sup = 0.024
                                       = 0.012
{root vegetables} ---> {rolls/buns}:
                                       {whole milk, root vegetables} --->
conf = 0.223, sup = 0.024
                                       {yogurt}: conf = 0.297, sup = 0.015
{salty snack} ---> {other
                                       {yogurt, root vegetables} --->
vegetables): conf = 0.285, sup =
                                       {whole milk}: conf = 0.563, sup =
0.011
                                       0.015
{waffles} ---> {other vegetables}:
                                       {yogurt, whole milk} ---> {root
conf = 0.262, sup = 0.01
                                       vegetables): conf = 0.26, sup =
                                       0.015
```

```
{tropical fruit} ---> {newspapers}:
                                       {root vegetables} ---> {yogurt,
conf = 0.112, sup = 0.012
                                       whole milk\}: conf = 0.133, sup =
{newspapers} ---> {tropical fruit}:
                                       0.015
conf = 0.148, sup = 0.012
                                       {yogurt} ---> {whole milk, root
{rolls/buns} ---> {frankfurter}:
                                       vegetables): conf = 0.104, sup =
conf = 0.104, sup = 0.019
                                       0.015
{frankfurter} ---> {rolls/buns}:
                                       {whole milk, soda} ---> {yogurt}:
conf = 0.326, sup = 0.019
                                       conf = 0.261, sup = 0.01
{rolls/buns} ---> {soda}: conf =
                                       {yogurt, soda} ---> {whole milk}:
                                       conf = 0.383, sup = 0.01
0.208, \sup = 0.038
{soda} ---> {rolls/buns}: conf =
                                       {yogurt, whole milk} ---> {soda}:
0.22, \sup = 0.038
                                       conf = 0.187, sup = 0.01
{frankfurter} ---> {soda}: conf =
                                       {whole milk, other vegetables} --->
0.191, \sup = 0.011
                                       {whipped/sour cream}: conf = 0.196,
                                       sup = 0.015
{citrus fruit} ---> {tropical
fruit}: conf = 0.241, sup = 0.02
                                       {whipped/sour cream, other
{tropical fruit} ---> {citrus
                                       vegetables} ---> {whole milk}: conf
fruit}: conf = 0.19, sup = 0.02
                                       = 0.507, \sup = 0.015
{citrus fruit} ---> {yogurt}: conf
                                       {whipped/sour cream, whole milk} --
= 0.262, \sup = 0.022
                                       -> {other vegetables}: conf =
{yogurt} ---> {citrus fruit}: conf
                                       0.454, \sup = 0.015
= 0.155, \sup = 0.022
                                       {whipped/sour cream} ---> {whole
{citrus fruit} ---> {whole milk}:
                                       milk, other vegetables}: conf =
conf = 0.369, sup = 0.031
                                       0.204, \sup = 0.015
{whole milk} ---> {citrus fruit}:
                                       {pork, other vegetables} ---> {whole
conf = 0.119, sup = 0.031
                                       milk: conf = 0.469, sup = 0.01
{tropical fruit} ---> {whole milk}:
                                       {whole milk, other vegetables} --->
conf = 0.403, sup = 0.042
                                       \{pork\}: conf = 0.136, sup = 0.01
{whole milk} ---> {tropical fruit}:
                                       {whole milk, pork} ---> {other
conf = 0.166, sup = 0.042
                                       vegetables): conf = 0.459, sup =
{citrus fruit} ---> {bottled water}:
                                       0.01
conf = 0.163, sup = 0.014
                                       {pork} ---> {whole milk, other
{bottled water} ---> {citrus fruit}:
                                       vegetables}: conf = 0.176, sup =
conf = 0.122, sup = 0.014
                                       0.01
{bottled water} ---> {yogurt}: conf
                                       {soda, other vegetables} ---> {whole
= 0.208, \sup = 0.023
                                       milk: conf = 0.425, sup = 0.014
{yogurt} ---> {bottled water}: conf
                                       {whole milk, other vegetables} --->
                                       \{soda\}: conf = 0.186, sup = 0.014
= 0.165, \sup = 0.023
{bottled water} ---> {whole milk}:
                                       {whole milk, soda} ---> {other
conf = 0.311, sup = 0.034
                                       vegetables): conf = 0.348, sup =
{whole milk} ---> {bottled water}:
                                       0.014
conf = 0.135, sup = 0.034
                                       {root vegetables, other vegetables}
{curd} ---> {tropical fruit}: conf
                                       ---> \{\text{whole milk}\}: \text{conf} = 0.489,
= 0.193, \sup = 0.01
                                       sup = 0.023
```

```
\{\text{curd}\} ---> \{\text{yogurt}\}: \text{conf} = 0.324,
                                       {whole milk, root vegetables} --->
sup = 0.017
                                       {other vegetables}: conf = 0.474,
                                       sup = 0.023
{yogurt} ---> {curd}: conf = 0.124,
sup = 0.017
                                       {whole milk, other vegetables} --->
{curd} ---> {whole milk}: conf =
                                       {root vegetables}: conf = 0.31, sup
0.49, \sup = 0.026
                                       = 0.023
{whole milk} ---> {curd}: conf =
                                       {root vegetables} ---> {whole milk,
0.102, \sup = 0.026
                                       other vegetables}: conf = 0.213,
{other vegetables} ---> {tropical
                                       sup = 0.023
fruit}: conf = 0.185, sup = 0.036
                                       {other vegetables} ---> {whole milk,
{tropical fruit} ---> {other
                                       root vegetables}: conf = 0.12, sup
vegetables}: conf = 0.342, sup =
                                       = 0.023
                                       {root vegetables, rolls/buns} --->
{tropical fruit} ---> {bottled
                                       {other vegetables}: conf = 0.502,
water\}: conf = 0.176, sup = 0.019
                                       sup = 0.012
                                       {other vegetables, rolls/buns} --->
{bottled water} ---> {tropical
fruit}: conf = 0.167, sup = 0.019
                                       {root vegetables}: conf = 0.286,
{other vegetables} ---> {bottled
                                       sup = 0.012
water\}: conf = 0.128, sup = 0.025
                                       {root vegetables, other vegetables}
{bottled water} ---> {other
                                       ---> {rolls/buns}: conf = 0.258,
vegetables): conf = 0.224, sup =
                                       sup = 0.012
                                       {root vegetables} ---> {other
0.025
{chocolate} ---> {other vegetables}:
                                       vegetables, rolls/buns}: conf =
conf = 0.256, sup = 0.013
                                       0.112, \sup = 0.012
{white bread} ---> {other
                                       {root vegetables, tropical fruit} --
vegetables): conf = 0.326, sup =
                                       -> {other vegetables}: conf =
                                       0.585, \sup = 0.012
{rolls/buns} ---> {other
                                       {root vegetables, other vegetables}
vegetables): conf = 0.232, sup =
                                       ---> {tropical fruit}: conf = 0.26,
0.043
                                       sup = 0.012
{other vegetables} --->
                                       {tropical fruit, other vegetables} -
                                       --> {root vegetables}: conf =
{rolls/buns}: conf = 0.22, sup =
0.043
                                       0.343, \sup = 0.012
{bottled beer} ---> {other
                                       {root vegetables} ---> {tropical
vegetables}: conf = 0.201, sup =
                                       fruit, other vegetables}: conf =
0.016
                                       0.113, \sup = 0.012
{bottled beer} ---> {rolls/buns}:
                                       {tropical fruit} ---> {root
conf = 0.169, sup = 0.014
                                       vegetables, other vegetables}: conf
{whole milk} ---> {yogurt}: conf =
                                       = 0.117, \sup = 0.012
0.219, \sup = 0.056
                                       {whole milk, curd} ---> {yogurt}:
{yogurt} ---> {whole milk}: conf =
                                       conf = 0.385, sup = 0.01
0.402, \sup = 0.056
                                       {yogurt, curd} ---> {whole milk}:
{butter} ---> {yogurt}: conf =
                                       conf = 0.582, sup = 0.01
0.264, \sup = 0.015
```

```
{yogurt} ---> {butter}: conf =
0.105, \sup = 0.015
{butter} ---> {whole milk}: conf =
0.497, \sup = 0.028
{whole milk} ---> {butter}: conf =
0.108, \sup = 0.028
{long life bakery product} --->
{whole milk}: conf = 0.361, sup =
0.014
{other vegetables} ---> {whole
milk: conf = 0.387, sup = 0.075
{whole milk} ---> {other
vegetables): conf = 0.293, sup =
0.075
{long life bakery product} --->
{other vegetables}: conf = 0.285,
sup = 0.011
{cream cheese} ---> {yogurt}: conf
= 0.313, \sup = 0.012
{pip fruit} ---> {yogurt}: conf =
0.238, sup = 0.018
{yogurt} ---> {pip fruit}: conf =
0.129, \sup = 0.018
{tropical fruit} ---> {yogurt}:
conf = 0.279, sup = 0.029
{yogurt} ---> {tropical fruit}:
conf = 0.21, sup = 0.029
{pastry, other vegetables} --->
{whole milk}: conf = 0.468, sup =
0.011
{whole milk, other vegetables} --->
{pastry}: conf = 0.141, sup = 0.011
{whole milk, pastry} ---> {other
vegetables): conf = 0.318, sup =
0.011
{pastry} ---> {whole milk, other
vegetables): conf = 0.119, sup =
0.011
{other vegetables, rolls/buns} --->
{yogurt}: conf = 0.27, sup = 0.011
{yogurt, rolls/buns} ---> {other
vegetables): conf = 0.334, sup =
0.011
```

```
{yogurt, whole milk} ---> {curd}:
conf = 0.18, sup = 0.01
{curd} ---> {yogurt, whole milk}:
conf = 0.189, sup = 0.01
{whole milk, tropical fruit} --->
{yogurt}: conf = 0.358, sup = 0.015
{yogurt, tropical fruit} ---> {whole
milk: conf = 0.517, sup = 0.015
{yogurt, whole milk} ---> {tropical
fruit}: conf = 0.27, sup = 0.015
{tropical fruit} ---> {yogurt, whole
milk: conf = 0.144, sup = 0.015
{yogurt} ---> {whole milk, tropical
fruit}: conf = 0.109, sup = 0.015
{whole milk, citrus fruit} --->
{yogurt}: conf = 0.337, sup = 0.01
{yogurt, citrus fruit} ---> {whole
milk: conf = 0.474, sup = 0.01
{yogurt, whole milk} ---> {citrus
fruit}: conf = 0.183, sup = 0.01
{citrus fruit} ---> {yogurt, whole
milk: conf = 0.124, sup = 0.01
```

```
{yogurt, other vegetables} --->
{rolls/buns}: conf = 0.265, sup =
0.011
{bottled water, other vegetables} --
\rightarrow {whole milk}: conf = 0.434, sup
= 0.011
{whole milk, other vegetables} --->
{bottled water}: conf = 0.144, sup
= 0.011
{whole milk, bottled water} --->
{other vegetables}: conf = 0.314,
sup = 0.011
{whole milk, rolls/buns} --->
{yogurt}: conf = 0.275, sup = 0.016
{yogurt, rolls/buns} ---> {whole
milk: conf = 0.453, sup = 0.016
{yogurt, whole milk} --->
{rolls/buns}: conf = 0.278, sup =
0.016
{yogurt} ---> {whole milk,
rolls/buns): conf = 0.112, sup =
0.016
{other vegetables, citrus fruit} --
\rightarrow {whole milk}: conf = 0.451, sup
= 0.013
{whole milk, citrus fruit} --->
{other vegetables}: conf = 0.427,
sup = 0.013
{whole milk, other vegetables} --->
{citrus fruit}: conf = 0.174, sup =
0.013
{citrus fruit} ---> {whole milk,
other vegetables}: conf = 0.157,
sup = 0.013
{sausage, other vegetables} --->
{whole milk}: conf = 0.377, sup =
0.01
{whole milk, other vegetables} --->
{\text{sausage}}: conf = 0.136, sup = 0.01
{whole milk, sausage} ---> {other
vegetables): conf = 0.34, sup =
0.01
```

```
{sausage} ---> {whole milk, other
vegetables): conf = 0.108, sup =
0.01
{butter, other vegetables} --->
{whole milk}: conf = 0.574, sup =
0.011
{whole milk, other vegetables} --->
{butter}: conf = 0.154, sup = 0.011
{whole milk, butter} ---> {other
vegetables}: conf = 0.417, sup =
0.011
{butter} ---> {whole milk, other
vegetables): conf = 0.207, sup =
0.011
{other vegetables, tropical fruit} -
--> {yogurt}: conf = 0.343, sup =
0.012
{yogurt, other vegetables} --->
{tropical fruit}: conf = 0.283, sup
{yogurt, tropical fruit} ---> {other
vegetables): conf = 0.42, sup =
0.012
{tropical fruit} ---> {yogurt, other
vegetables): conf = 0.117, sup =
0.012
{whipped/sour cream, other
vegetables > ---> {yogurt}: conf =
0.352, \sup = 0.01
{yogurt, other vegetables} --->
{whipped/sour cream}: conf = 0.234,
sup = 0.01
{yogurt, whipped/sour cream} --->
{other vegetables}: conf = 0.49,
sup = 0.01
{whipped/sour cream} ---> {yogurt,
other vegetables}: conf = 0.142,
sup = 0.01
{yogurt, whole milk} --->
{whipped/sour cream}: conf = 0.194,
sup = 0.011
{whipped/sour cream, yogurt} --->
\{\text{whole milk}\}: \text{conf} = 0.525, \text{sup} =
0.011
```

```
{whipped/sour cream, whole milk} --
-> {yogurt}: conf = 0.338, sup =
0.011
{whipped/sour cream} ---> {yogurt,
whole milk}: conf = 0.152, sup =
0.011
{other vegetables, tropical fruit} -
--> {whole milk}: conf = 0.476, sup
= 0.017
{whole milk, other vegetables} --->
{tropical fruit}: conf = 0.228, sup
= 0.017
{whole milk, tropical fruit} --->
{other vegetables}: conf = 0.404,
sup = 0.017
{tropical fruit} ---> {whole milk,
other vegetables}: conf = 0.163,
sup = 0.017
{fruit/vegetable juice, other
vegetables} ---> {whole milk}: conf
= 0.498, \sup = 0.01
{whole milk, other vegetables} --->
{fruit/vegetable juice}: conf =
0.14, \sup = 0.01
{whole milk, fruit/vegetable juice}
---> {other vegetables}: conf =
0.393, \sup = 0.01
{fruit/vegetable juice} ---> {whole
milk, other vegetables}: conf =
0.145, \sup = 0.01
{whole milk, other vegetables} --->
{yogurt}: conf = 0.298, sup = 0.022
{yogurt, other vegetables} --->
{whole milk}: conf = 0.513, sup =
0.022
{yogurt, whole milk} ---> {other
vegetables): conf = 0.397, sup =
0.022
{other vegetables} ---> {yogurt,
whole milk): conf = 0.115, sup =
0.022
{yogurt} ---> {whole milk, other
vegetables): conf = 0.16, sup =
0.022
```

```
{other vegetables, root vegetables}
---> {yogurt}: conf = 0.273, sup =
0.013
{yogurt, other vegetables} --->
{root vegetables}: conf = 0.297,
sup = 0.013
{yogurt, root vegetables} --->
{other vegetables}: conf = 0.5, sup
= 0.013
{root vegetables} ---> {yogurt,
other vegetables}: conf = 0.118,
sup = 0.013
{pip fruit, other vegetables} --->
{whole milk}: conf = 0.518, sup =
0.014
{whole milk, other vegetables} --->
{pip fruit}: conf = 0.181, sup =
0.014
{whole milk, pip fruit} ---> {other
vegetables}: conf = 0.449, sup =
0.014
{pip fruit} ---> {whole milk, other
vegetables): conf = 0.179, sup =
0.014
{other vegetables, domestic eggs} --
\rightarrow {whole milk}: conf = 0.553, sup
= 0.012
{whole milk, domestic eggs} --->
{other vegetables}: conf = 0.41,
sup = 0.012
{whole milk, other vegetables} --->
{domestic eggs}: conf = 0.164, sup
= 0.012
{domestic eggs} ---> {whole milk,
other vegetables}: conf = 0.194,
sup = 0.012
{other vegetables, citrus fruit} --
-> {root vegetables}: conf = 0.359,
sup = 0.01
{root vegetables, citrus fruit} --->
{other vegetables}: conf = 0.586,
sup = 0.01
```

```
{other vegetables, root vegetables}
---> {citrus fruit}: conf = 0.219,
sup = 0.01
{citrus fruit} ---> {other
vegetables, root vegetables): conf
= 0.125, \sup = 0.01
{root vegetables, rolls/buns} --->
{whole milk}: conf = 0.523, sup =
0.013
{whole milk, rolls/buns} ---> {root
vegetables): conf = 0.224, sup =
0.013
{whole milk, root vegetables} --->
{rolls/buns}: conf = 0.26, sup =
0.013
{root vegetables} ---> {whole milk,
rolls/buns}: conf = 0.117, sup =
0.013
{other vegetables, rolls/buns} --->
{whole milk}: conf = 0.42, sup =
0.018
{whole milk, rolls/buns} ---> {other
vegetables): conf = 0.316, sup =
0.018
{whole milk, other vegetables} --->
{rolls/buns}: conf = 0.239, sup =
{tropical fruit, rolls/buns} --->
\{\text{whole milk}\}: \text{conf} = 0.446, \text{sup} =
0.011
{whole milk, rolls/buns} --->
{tropical fruit}: conf = 0.194, sup
= 0.011
{whole milk, tropical fruit} --->
{rolls/buns}: conf = 0.26, sup =
0.011
{tropical fruit} ---> {whole milk,
rolls/buns}: conf = 0.105, sup =
0.011
{root vegetables, tropical fruit} --
\rightarrow {whole milk}: conf = 0.57, sup =
0.012
```

```
{whole milk, root vegetables} --->
{tropical fruit}: conf = 0.245, sup
= 0.012
{whole milk, tropical fruit} --->
{root vegetables}: conf = 0.284,
sup = 0.012
{root vegetables} ---> {whole milk,
tropical fruit}: conf = 0.11, sup =
0.012
{tropical fruit} ---> {whole milk,
root vegetables}: conf = 0.114, sup
= 0.012
{whole milk, root vegetables} --->
{yogurt}: conf = 0.297, sup = 0.015
{yogurt, root vegetables} --->
\{\text{whole milk}\}: \text{conf} = 0.563, \text{sup} =
0.015
{yogurt, whole milk} ---> {root
vegetables): conf = 0.26, sup =
0.015
{root vegetables} ---> {yogurt,
whole milk): conf = 0.133, sup =
0.015
{yogurt} ---> {whole milk, root
vegetables): conf = 0.104, sup =
0.015
{whole milk, soda} ---> {yogurt}:
conf = 0.261, sup = 0.01
{yogurt, soda} ---> {whole milk}:
conf = 0.383, sup = 0.01
{yogurt, whole milk} ---> {soda}:
conf = 0.187, sup = 0.01
{whole milk, other vegetables} --->
{whipped/sour cream}: conf = 0.196,
sup = 0.015
{whipped/sour cream, other
vegetables > ---> {whole milk}: conf
= 0.507, \sup = 0.015
{whipped/sour cream, whole milk} --
-> {other vegetables}: conf =
0.454, \sup = 0.015
{whipped/sour cream} ---> {whole
milk, other vegetables): conf =
0.204, \sup = 0.015
```

```
{pork, other vegetables} ---> {whole
milk: conf = 0.469, sup = 0.01
{whole milk, other vegetables} --->
\{pork\}: conf = 0.136, sup = 0.01
{whole milk, pork} ---> {other
vegetables): conf = 0.459, sup =
0.01
{pork} ---> {whole milk, other
vegetables}: conf = 0.176, sup =
0.01
{soda, other vegetables} ---> {whole
milk: conf = 0.425, sup = 0.014
{whole milk, other vegetables} --->
{soda}: conf = 0.186, sup = 0.014
{whole milk, soda} ---> {other
vegetables): conf = 0.348, sup =
0.014
{root vegetables, other vegetables}
---> {whole milk}: conf = 0.489,
sup = 0.023
{whole milk, root vegetables} --->
{other vegetables}: conf = 0.474,
sup = 0.023
{whole milk, other vegetables} --->
{root vegetables}: conf = 0.31, sup
= 0.023
{root vegetables} ---> {whole milk,
other vegetables}: conf = 0.213,
sup = 0.023
{other vegetables} ---> {whole milk,
root vegetables}: conf = 0.12, sup
= 0.023
{root vegetables, rolls/buns} --->
{other vegetables}: conf = 0.502,
sup = 0.012
{other vegetables, rolls/buns} --->
{root vegetables}: conf = 0.286,
sup = 0.012
{root vegetables, other vegetables}
---> {rolls/buns}: conf = 0.258,
sup = 0.012
{root vegetables} ---> {other
vegetables, rolls/buns): conf =
0.112, \sup = 0.012
```

```
{root vegetables, tropical fruit} --
-> {other vegetables}: conf =
0.585, \sup = 0.012
{root vegetables, other vegetables}
---> {tropical fruit}: conf = 0.26,
sup = 0.012
{tropical fruit, other vegetables} -
--> {root vegetables}: conf =
0.343, \sup = 0.012
{root vegetables} ---> {tropical
fruit, other vegetables}: conf =
0.113, \sup = 0.012
{tropical fruit} ---> {root
vegetables, other vegetables}: conf
= 0.117, \sup = 0.012
{whole milk, curd} ---> {yogurt}:
conf = 0.385, sup = 0.01
{yogurt, curd} ---> {whole milk}:
conf = 0.582, sup = 0.01
{yogurt, whole milk} ---> {curd}:
conf = 0.18, sup = 0.01
{curd} ---> {yogurt, whole milk}:
conf = 0.189, sup = 0.01
{whole milk, tropical fruit} --->
{yogurt}: conf = 0.358, sup = 0.015
{yogurt, tropical fruit} ---> {whole
milk: conf = 0.517, sup = 0.015
{yogurt, whole milk} ---> {tropical
fruit}: conf = 0.27, sup = 0.015
{tropical fruit} ---> {yogurt, whole
milk: conf = 0.144, sup = 0.015
{yogurt} ---> {whole milk, tropical
fruit}: conf = 0.109, sup = 0.015
{whole milk, citrus fruit} --->
{yogurt}: conf = 0.337, sup = 0.01
{yogurt, citrus fruit} ---> {whole
milk: conf = 0.474, sup = 0.01
{yogurt, whole milk} ---> {citrus
fruit}: conf = 0.183, sup = 0.01
{citrus fruit} ---> {yogurt, whole
milk: conf = 0.124, sup = 0.01
```

## PART3.interesting factor

```
{'margarine-->soda': 0.9956065759637188, 'root vegetables-->newspapers':
1.3206519155813292, 'newspapers-->root vegetables': 1.3206519155813292,
'white bread-->soda': 1.399043675441191, 'coffee-->rolls/buns':
1.028308544841467, 'beef-->yogurt': 1.5976012498022465, 'pip fruit-
->pastry': 1.586290322580645, 'pastry-->pip fruit': 1.586290322580645,
'chicken-->whole milk': 1.6044106192821026, 'margarine-->yogurt':
1.742311507936508, 'yogurt-->margarine': 1.742311507936508, 'pip fruit-
->soda': 1.0097377660741715, 'napkins-->tropical fruit': 1.831988033416121,
'onions-->whole milk': 1.5269647015845473, 'onions-->other vegetables':
2.3722681185014167, 'citrus fruit-->soda': 0.8876798876798877, 'newspapers-
->other vegetables': 1.2508911507475624, 'pip fruit-->bottled water':
1.2647515604752153, 'sausage-->bottled water': 1.1554598422123723, 'bottled
water-->sausage': 1.1554598422123723, 'napkins-->soda': 1.313968694273826,
'shopping bags-->root vegetables': 1.1929612772053049, 'root vegetables-
->shopping bags': 1.1929612772053049, 'other vegetables-->beef':
1.943066231613079, 'beef-->other vegetables': 1.943066231613079, 'butter
milk-->other vegetables': 1.9169158744565997, 'root vegetables-->pork':
2.1682098765432096, 'pork-->root vegetables': 2.1682098765432096, 'shopping
bags-->tropical fruit': 1.308044535643715, 'tropical fruit-->shopping bags':
1.308044535643715, 'cream cheese -->other vegetables': 1.7889769190347227,
'frankfurter-->yogurt': 1.3595179451090778, 'root vegetables-->pip fruit':
1.8866792549350022, 'pip fruit-->root vegetables': 1.8866792549350022,
'tropical fruit-->whipped/sour cream': 1.8384188245642972, 'whipped/sour
cream-->tropical fruit': 1.8384188245642972, 'yogurt-->whipped/sour cream':
2.0742509769865394, 'whipped/sour cream-->yogurt': 2.0742509769865394,
'sliced cheese-->whole milk': 1.7213560027277242, 'shopping bags-->bottled
water: 1.0084277743441348, 'white bread-->whole milk: 1.5881474304630416,
'frozen vegetables-->yogurt': 1.8489235017474217, 'other vegetables-
->yogurt': 4.158821816770186, 'yogurt-->other vegetables':
4.158821816770186, 'citrus fruit-->rolls/buns': 1.102034870691587, 'other
vegetables-->pip fruit': 4.615903678705002, 'pip fruit-->other vegetables':
4.615903678705002, 'citrus fruit-->pip fruit': 2.208594224723257, 'pip
fruit-->citrus fruit': 2.208594224723257, 'citrus fruit-->fruit/vegetable
juice': 1.733327113073949, 'fruit/vegetable juice-->citrus fruit':
1.733327113073949, 'citrus fruit-->sausage': 1.4514462809917357, 'sausage-
->citrus fruit': 1.4514462809917357, 'tropical fruit-->sausage':
1.4130035823349778, 'sausage-->tropical fruit': 1.4130035823349778, 'pip
fruit-->sausage': 1.5164752362333005, 'sausage-->pip fruit':
1.5164752362333005, 'hygiene articles-->whole milk': 1.5219746208604144,
'hard cheese-->whole milk': 1.6076815497174028, 'coffee-->other vegetables':
1.194739985625057, 'other vegetables-->pastry': 3.3903260869565215, 'pastry-
->other vegetables': 3.3903260869565215, 'shopping bags-->other vegetables':
```

```
1.21603659855955, 'other vegetables-->shopping bags': 1.21603659855955,
'shopping bags-->pastry': 1.3571517027863775, 'pastry-->shopping bags':
1.3571517027863775, 'cream cheese -->whole milk': 1.6256695950289264,
'hamburger meat-->whole milk': 1.735410118150145, 'margarine-->bottled
water': 1.5865132755800877, 'frankfurter-->other vegetables':
1.44351930708319, 'frankfurter-->root vegetables': 1.5818000514668038,
'other vegetables-->sausage': 3.8323966567852437, 'sausage-->other
vegetables': 3.8323966567852437, 'frankfurter-->sausage':
1.8168103448275863, 'sausage-->frankfurter': 1.8168103448275863, 'root
vegetables-->beef': 3.0403668431100312, 'beef-->root vegetables':
3.0403668431100312, 'bottled beer-->whole milk': 0.9932366843926731,
'fruit/vegetable juice-->yogurt': 1.8551049111627773, 'yogurt-
->fruit/vegetable juice': 1.8551049111627773, 'shopping bags-->yogurt':
1.109654388071018, 'yogurt-->shopping bags': 1.109654388071018, 'shopping
bags-->whole milk': 0.9733636894136045, 'napkins-->yogurt':
1.684218347533188, 'napkins-->whole milk': 1.4742677880844848, 'pork-
->rolls/buns': 1.064328562946584, 'citrus fruit-->other vegetables':
8.435380312996418, 'other vegetables-->citrus fruit': 4.6621955453477195,
'chicken-->other vegetables': 2.1554392789633727, 'citrus fruit-->root
vegetables': 4.511420316141347, 'root vegetables-->citrus fruit':
4.511420316141347, 'chicken-->root vegetables': 2.32622064440829,
'fruit/vegetable juice-->sausage': 1.4820675105485233, 'sausage-
->fruit/vegetable juice': 1.4820675105485233, 'brown bread-->sausage':
1.7517455115417497, 'sausage-->brown bread': 1.7517455115417497, 'citrus
fruit-->whipped/sour cream': 1.8337689720668446, 'whipped/sour cream-
->citrus fruit': 1.8337689720668446, 'sausage-->yogurt': 1.4972888506051771,
'yogurt-->sausage': 1.4972888506051771, 'root vegetables-->sausage':
1.4595700474898237, 'sausage-->root vegetables': 1.4595700474898237,
'margarine-->rolls/buns': 1.3686150651065658, 'fruit/vegetable juice-->whole
milk': 1.4421604002366317, 'whole milk-->fruit/vegetable juice':
1.4421604002366317, 'fruit/vegetable juice-->rolls/buns': 1.093458321768249,
'root vegetables-->margarine': 1.7361354037106138, 'margarine-->root
vegetables': 1.7361354037106138, 'root vegetables-->fruit/vegetable juice':
1.52262159665806, 'fruit/vegetable juice-->root vegetables':
1.52262159665806, 'domestic eggs-->rolls/buns': 1.3417510028206543, 'frozen
vegetables-->rolls/buns': 1.1494091674584557, 'root vegetables-->frozen
vegetables': 2.211175885898205, 'frozen vegetables-->root vegetables':
2.211175885898205, 'bottled beer-->soda': 1.2092094413522985, 'bottled beer-
->bottled water': 1.7707258881361918, 'bottled water-->bottled beer':
1.7707258881361918, 'fruit/vegetable juice-->bottled water':
1.7815714938209786, 'bottled water-->fruit/vegetable juice':
1.7815714938209786, 'butter milk-->whole milk': 1.622385414028868,
'frankfurter-->whole milk': 1.3630294880414944, 'newspapers-->whole milk':
1.341110302858258, 'whole milk-->newspapers': 1.341110302858258, 'domestic
```

```
eggs-->citrus fruit': 1.9749929124929126, 'citrus fruit-->domestic eggs':
1.9749929124929126, 'oil-->whole milk': 1.57396754269105, 'margarine-->whole
milk': 1.6170980346641903, 'tropical fruit-->pip fruit': 2.574647568142035,
'pip fruit-->tropical fruit': 2.574647568142035, 'pip fruit-->whole milk':
1.5570431605115762, 'whole milk-->pip fruit': 1.5570431605115762,
'rolls/buns-->whole milk': 9.007861599023917, 'whole milk-->rolls/buns':
5.495907235349768, 'pip fruit-->rolls/buns': 1.0011137561891854, 'chocolate-
->whole milk': 1.3152427051463536, 'brown bread-->rolls/buns':
1.0566637380842216, 'beef-->whole milk': 1.5851795469758803, 'sausage-
->whole milk': 1.2452519625221574, 'whole milk-->sausage':
1.2452519625221574, 'pastry-->sausage': 1.4962337662337664, 'sausage-
->pastry': 1.4962337662337664, 'salty snack-->whole milk':
1.1572618084883335, 'frozen vegetables-->whole milk': 1.663093983169127,
'frozen vegetables-->other vegetables': 1.912108287904155, 'rolls/buns-
->pastry': 1.2799557766721943, 'pastry-->rolls/buns': 1.2799557766721943,
'beef-->rolls/buns': 1.4118575940281364, 'other vegetables-->margarine':
1.7406634991533834, 'margarine-->other vegetables': 1.7406634991533834,
'tropical fruit-->fruit/vegetable juice': 1.8095010303208716,
'fruit/vegetable juice-->tropical fruit': 1.8095010303208716, 'other
vegetables-->fruit/vegetable juice': 3.8904272151898733, 'fruit/vegetable
juice-->other vegetables': 3.8904272151898733, 'brown bread-->other
vegetables': 1.4905025393002633, 'domestic eggs-->other vegetables':
4.689818927675585, 'other vegetables-->domestic eggs': 4.689818927675585,
'ham-->whole milk': 1.727509139972145, 'other vegetables-->butter':
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