

Automated Reasoning for Social Choice Theory Exercises

Beatrice Napolitano

LAMSADE - October 2019

1 Question 1

For $n = 2$ and $m = 3$, the number of different resolute voting rules that are strategyproof can be obtained by querying the length of the list *lex1* produced by the following:

```
cnf_lex1 = ( cnfAtLeastOne() + cnfResolute() + cnfStrategyProof() )  
l_lex1 = list( itersolve( cnf_lex1 ) )
```

There are 17 rules satisfying these two axioms. If we analyze the elements of the list we are able to give a descriptions of such rules.

2 Question 2