**2.1.**

Expectation of poisson distribution is lambda, in our case, 6 is the expected times of yearly claims

Expectation of pareto distribution is Xm\*a/(a-1) =(2.5\*180)/(2.5-1) = 300.

**For individual policy,**

Fare = (expected times of yearly claim \* expected claiming amount of money /12)/.7 = (6)\* 300= 214.29

**For family policy, since they are fair policy,**

Fare = expected number of family members \* fare for individual = 3.5\*214.29 = 750.02

**Computing result of Python(code is included in the folder contains this article):**

>>> simulate\_IndiCost(100000) # simulating individual policy

213 # precision of $1

>>> simulate\_IndiCost(100000)

214

>>> simulate\_FamiCost(100000) # simulating family policy

752

>>> simulate\_FamiCost(100000)

750

>>>