An insurance company wants to offer the following product

With XX Euro per year, you can buy insurance for your car such as the company pays the first damage amount if it appears before one year of use of the car and if the mileage is below 14k kms. From past data the company knows that

* a typical car has mileage with a N(16,2.5) (in thousands of kms) if it is the first car of the family but if it is the second the distribution is N(8,4). 60% of the families have a second car.
* About the time to the first damage this is an exponential distribution with mean 20 months
* About the damage this is a gamma distribution with mean 100 and variance 10000 Euros.

What is the value for the product (find XX) if

* it expected to insure only 10 cars per year
* the number of cars is a Poisson with mean 10

You need to find the amount such as the probability that the company will not get bankrupt is less than 1%. Assume for simplicity that all cars buy the product at time 0. Also, the mileage refers to the entire year not the time of the damage)