

109. A company insures a fleet of vehicles. Aggregate losses have a compound Poisson distribution. The expected number of losses is 20. Loss amounts, regardless of vehicle type, have exponential distribution with $\theta = 200$.

In order to reduce the cost of the insurance, two modifications are to be made:

- (i) a certain type of vehicle will not be insured. It is estimated that this will reduce loss frequency by 20%.
- (ii) a deductible of 100 per loss will be imposed.

Calculate the expected aggregate amount paid by the insurer after the modifications.

- (A) 1600
- (B) 1940
- (C) 2520
- (D) 3200
- (E) 3880