1. Under a zero-modified geometric distribution, $\text{Var}(N) = 88$.

   If $p_0^M = 1/5$, calculate $\beta$. 
2. Losses are distributed as a Pareto with $\alpha = 2$ and $\theta$.

If losses are subject to an ordinary deductible of 20,000, the expected value **per payment** is 30,000.

If losses are subject to a franchise deductible of 20,000, calculate the expected value **per loss**.