

Problem. Medical and dental claims are assumed to be independent with compound Poisson distributions as follows:

Claim type	Claim amount distribution	λ
Medical claims	Uniform(0, 1000)	2
Dental claims	Uniform(0, 200)	3

Let X be the amount of a given claim under a policy that covers both medical and dental claims.

Determine $\mathbb{E}[(X - 100)_+]$, the expected cost (in excess of 100) of any given claims.