

STAT 479
Quiz 1
Spring 2017
January 24, 2017

The Zhou Health Insurance Company sells a hospital indemnity policy that pays the cost of a hospital stay. There are no deductibles or upper limits.

Let X be the random variable that represents the amount of a claim under this policy.

For males, X is distributed as a Pareto distribution with $\alpha = 6$ and $\theta = 10,000$.

1. Calculate the expected value and variance of X for males.

For females, X is distributed uniformly between 500 and 2500.

2. Calculate the expected value and variance of X for females.

Zhou decides to apply a 250 deductible to each policy.

3. For both males and females, calculate the expected value of claim payment given that $X > 250$. Symbolically, this is $e(250)$.