

Quiz 6
STAT 479
October 19, 2010

1. Hewitt Health Insurance Company sells a hospital indemnity program that covers adults and children.

For adults, there is a 10% chance of a claim. Claims for adults are distributed as a gamma distribution with $\alpha = 4$ and θ .

For children, there is a 5% chance of a claim. Claims for children are distributed as a gamma distribution with $\alpha = 2$ and θ .

Hewitt has 1000 policies covering adults and 200 policies covering children.

The variance of Hewitt's portfolio of policies is 75,920,000.

Determine θ .

2. The Pareto distribution is being discretized using the Method of Moment Matching where the first moment is being matched. The Pareto distribution has parameters of $\alpha = 3$ and $\theta = 400$.

The span used in this process is 250.

Calculate the probability assigned 500.