Stat 479 Fall 2009 Quiz 1 September 3, 2009

1. You are given that $F_x(x) = 1 - (100/x)^4$ for $x \ge 100$.

У	$\mathbf{f}_{\mathbf{y}}(\mathbf{y})$
100	0.4
200	0.3
300	0.2
400	0.1

You are also given that $f_y(y)$ is:

Calculate Var(Y) - Var(X).

2. Automobile losses are distributed as a Gamma distribution with parameters α and θ . The expected loss is 800 and the variance of the loss is 160,000.

Determine the mode.