

## Question #2

**Key: E**

The standard for full credibility is  $\left(\frac{1.645}{.02}\right)^2 \left(1 + \frac{Var(X)}{E(X)^2}\right)$  where  $X$  is the claim size

variable. For the Pareto variable,  $E(X) = .5/5 = .1$  and  $Var(X) = \frac{2(.5)^2}{5(4)} - (.1)^2 = .015$ .

Then the standard is  $\left(\frac{1.645}{.02}\right)^2 \left(1 + \frac{.015}{.1^2}\right) = 16,913$  claims.