



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2013_BJMCS_7930
Title of the Manuscript:	Bayesian Inference Based on the Interval Grouped Data from the Weibull Model with Application

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
Remarks: Basically, the right hand side of Equation 13 is different from the right hand side of Equation (12). The difference depends upon the difference among w1, w2, and z. Therefore, Equation (13) is not right, since Equation (12) is the right posterior. I do not understand your definition of a best approximation estimate for the posterior and the Bayesian estimator.	$\Pi(\theta G) = \frac{\theta^{-(a+1)} \exp\left(\frac{-S}{\theta}\right) \prod_{j=1}^k \left(1 - \exp\left(\frac{-(a_j^\beta - a_{j-1}^\beta)}{\theta}\right)\right)^{f_j}}{\int_0^\infty \theta^{-(a+1)} \exp\left(\frac{-S}{\theta}\right) \prod_{j=1}^k \left(1 - \exp\left(\frac{-(a_j^\beta - a_{j-1}^\beta)}{\theta}\right)\right)^{f_j} d\theta} \quad (12)$ Now, substitute for $\prod_{j=1}^k \left(1 - \exp\left(\frac{-(a_j^\beta - a_{j-1}^\beta)}{\theta}\right)\right)^{f_j}$ In both numerator and denominator of (12) $\prod_{j=1}^k \left(1 - \exp\left(\frac{-Z}{\theta}\right)\right)^{f_j} = \left(1 - \exp\left(\frac{-Z}{\theta}\right)\right)^{\sum_{j=1}^k f_j} = \left(1 - \exp\left(\frac{-Z}{\theta}\right)\right)^r$ where $r = n - f_{k+1}$ now use the binomial expansion $\left(1 - \exp\left(\frac{-Z}{\theta}\right)\right)^r = \sum_{j=0}^r \binom{r}{j} (-1)^j \exp\left(\frac{-jZ}{\theta}\right)$ This implies the posterior becomes $\Pi(\theta G) = \frac{\theta^{-(a+1)} \exp\left(\frac{-S}{\theta}\right) \sum_{j=0}^r \binom{r}{j} (-1)^j \exp\left(\frac{-jZ}{\theta}\right)}{\int_0^\infty \theta^{-(a+1)} \exp\left(\frac{-S}{\theta}\right) \sum_{j=0}^r \binom{r}{j} (-1)^j \exp\left(\frac{-jZ}{\theta}\right) d\theta}$ $= \Pi(\theta G) = \frac{\sum_{j=0}^r \binom{r}{j} (-1)^j \theta^{-(a+1)} \exp\left(\frac{-(jZ + S)}{\theta}\right)}{\sum_{j=0}^r \binom{r}{j} (-1)^j \int_0^\infty \theta^{-(a+1)} \exp\left(\frac{-(jZ + S)}{\theta}\right) d\theta} \text{ which is eq. (13)}$ Thanks for the Editor and Reviewers.