Bayes School 2013 at Stellenbosh

Problems based on lectures by Giulio d'Agostini

Answers

1. **NONE!**

2. **2/3**

3. (a) **11.3%**
   (b) **84%**
   (c) **5.3**
   (d) **171**
   (e) **0.58%**

4. (a) **45.5%**
   (b) **99.76%**
   (c) **89.3%**

5. (a) $f(\epsilon \,|\, x = n = 100) = 101\,\epsilon^{100}$
   (b) **1**
   (c) $101/102 \approx 0.9902$
   (d) $\epsilon_m = 1$; $\mathbf{E}[\epsilon] = 0.9902$; $\sigma(\epsilon) = 0.0097$

6. $p = 0.54 \pm 0.05$

7. (a) $\mu_1 = \mathbf{1.05 \pm 0.11}\,\mathrm{u}$
      $\mu_2 = \mathbf{1.23 \pm 0.11}\,\mathrm{u}$
   (b) $\rho = 0.862$
   (c) $\Delta\mu = 0.18 \pm 0.06\,\mathbf{u}$
   (d) $M = 2.28 \pm 0.21\,\mathbf{u}$