Probabilità e Statistica - 5 settembre 2011

	C1	C2	C3	C4	E1	E2
F1	0.93319	$\frac{44}{25}$ o $1,76$	0.9375	0.01967	$\begin{cases} f_{X,Y}(2,0) = f_{X,Y}(4,2) = \frac{1}{3} \\ f_{X,Y}(1,\frac{1}{2}) = f_{X,Y}(3,\frac{1}{2}) = \frac{1}{6} \\ f_X(1) = f_X(3) = \frac{1}{6} \\ f_X(2) = f_X(4) = \frac{1}{3} \end{cases}$ $f_Y(0) = f_Y(\frac{1}{2}) = f_Y(2) = \frac{1}{3}$ $\mathrm{cov}[X,Y] = \frac{7}{9}$ $\mathrm{P}[X > 2 \mid Y = \frac{1}{2}] = \frac{1}{2}$	$k = \frac{3}{\theta}$ $L = 3^n \theta^{-n} (x_1 \cdots x_n)^{\frac{3}{\theta}-1}$ $T = -\frac{3}{n} \sum_{i=1}^{n} \ln X_i$ T corretto
F2	0.99379	$\frac{56}{25}$ o $2,24$	0.9375	0.04527	$\begin{cases} f_{X,Y}(3,0) = f_{X,Y}(1,1) = \frac{1}{6} \\ f_{X,Y}(2,\frac{1}{4}) = f_{X,Y}(4,\frac{1}{4}) = \frac{1}{3} \\ f_X(1) = f_X(3) = \frac{1}{6} \\ f_X(2) = f_X(4) = \frac{1}{3} \end{cases}$ $f_Y(0) = f_Y(1) = \frac{1}{6}, \quad f_Y(\frac{1}{4}) = \frac{2}{3}$ $\mathrm{cov}[X,Y] = -\frac{2}{9}$ $\mathrm{P}[X > 3 \mid Y = \frac{1}{4}] = \frac{1}{2}$	$k = \frac{4}{\theta}$ $L = 4^n \theta^{-n} (x_1 \cdots x_n)^{\frac{4}{\theta}-1}$ $T = -\frac{4}{n} \sum_{i=1}^{n} \ln X_i$ T corretto
F3	0.99977	$\frac{7}{50}$ o $0,14$	0.9375	0.00829	$\begin{cases} f_{X,Y}(2,0) = f_{X,Y}(4,1) = \frac{1}{3} \\ f_{X,Y}(1,\frac{1}{4}) = f_{X,Y}(3,\frac{1}{4}) = \frac{1}{6} \\ f_X(1) = f_X(3) = \frac{1}{6} \\ f_X(2) = f_X(4) = \frac{1}{3} \end{cases}$ $f_Y(0) = f_Y(\frac{1}{4}) = f_Y(2) = \frac{1}{3}$ $\mathrm{cov}[X,Y] = \frac{7}{18}$ $\mathrm{P}[X > 2 \mid Y = \frac{1}{4}] = \frac{1}{2}$	$k = \frac{2}{\theta}$ $L = 2^n \theta^{-n} (x_1 \cdots x_n)^{\frac{2}{\theta}-1}$ $T = -\frac{2}{n} \sum_{i=1}^{n} \ln X_i$ T corretto
F4	0.69146	$\frac{11}{100}$ o $0,11$	0.9375	0.10014	$\begin{cases} f_{X,Y}(1,2) = f_{X,Y}(3,0) = \frac{1}{6} \\ f_{X,Y}(2,\frac{1}{2}) = f_{X,Y}(4,\frac{1}{2}) = \frac{1}{3} \\ f_X(1) = f_X(3) = \frac{1}{6} \\ f_X(2) = f_X(4) = \frac{1}{3} \end{cases}$ $f_Y(0) = f_Y(2) = \frac{1}{6}, \quad f_Y(\frac{1}{2}) = \frac{2}{3}$ $\mathrm{cov}[X,Y] = -\frac{4}{9}$ $\mathrm{P}[X > 3 \mid Y = \frac{1}{2}] = \frac{1}{2}$	$k = \frac{5}{\theta}$ $L = 5^n \theta^{-n} (x_1 \cdots x_n)^{\frac{5}{\theta}-1}$ $T = -\frac{5}{n} \sum_{i=1}^{n} \ln X_i$ T corretto