

Probabilità e Statistica - 3 Luglio 2007

	C1	C2	C3	C4	E1	E2
F1	4.68	$\frac{3}{4}$	0.69315	0.79824	$T_1 = 4\bar{X}_6 - 2$ T_1 corretto T_1 preferibile	$k = \frac{1}{4}$ $F_X(x) = \begin{cases} 0 & x < 0 \\ \frac{1}{2}\sqrt{x} & 0 \leq x < 4 \\ 1 & x \geq 4 \end{cases}$ $\text{Var}[X] = \frac{64}{25}$ $P\left[\frac{16}{9} \leq X \leq 8\right] = \frac{1}{3}$ $E[\sqrt{X}] = 1$
F2	7.84	$\frac{6}{13}$	0.40547	0.92538	$T_1 = \frac{12}{5}\bar{X}_7 - \frac{6}{5}$ T_1 corretto T_1 preferibile	$k = \frac{3}{2}$ $F_X(x) = \begin{cases} 0 & x < 0 \\ 3\sqrt{x} & 0 \leq x < \frac{1}{9} \\ 1 & x \geq \frac{1}{9} \end{cases}$ $\text{Var}[X] = \frac{4}{3645}$ $P\left[\frac{4}{81} \leq X \leq \frac{2}{9}\right] = \frac{1}{3}$ $E[\sqrt{X}] = \frac{1}{6}$
F3	7.02	$\frac{2}{5}$	0.28768	0.81966	$T_1 = 12\bar{X}_8 - 6$ T_1 corretto T_1 preferibile	$k = 1$ $F_X(x) = \begin{cases} 0 & x < 0 \\ 2\sqrt{x} & 0 \leq x < 1 \\ 1 & x \geq 1 \end{cases}$ $\text{Var}[X] = \frac{1}{180}$ $P\left[\frac{1}{9} \leq X \leq \frac{1}{2}\right] = \frac{1}{3}$ $E[\sqrt{X}] = \frac{1}{4}$
F4	11.76	$\frac{8}{9}$	0.18232	0.93362	$T_1 = \frac{12}{7}\bar{X}_9 - \frac{6}{7}$ T_1 corretto T_1 preferibile	$k = \frac{1}{6}$ $F_X(x) = \begin{cases} 0 & x < 0 \\ \frac{1}{3}\sqrt{x} & 0 \leq x < 9 \\ 1 & x \geq 9 \end{cases}$ $\text{Var}[X] = \frac{36}{5}$ $P[4 \leq X \leq 18] = \frac{1}{3}$ $E[\sqrt{X}] = \frac{3}{2}$