

Probabilità e Statistica - 24 Marzo 2009

	C1	C2	C3	C4	E1	E2
F1	0.49306	$\frac{5}{12}$	0.47178	0.77880	$k = \frac{3}{2}$ $F_X(x) = \begin{cases} 0 & x < 0 \\ 3\sqrt{x} & 0 \leq x < \frac{1}{9} \\ 1 & x \geq \frac{1}{9} \end{cases}$ $\text{Var}[X] = \frac{4}{3645}$ $P[4 \leq X \leq 18] = 0$ $E[\sqrt{X}] = \frac{1}{6}$	$T_1 = 2\bar{X}_n - 2$ T_1 preferibile $n \geq 2$
F2	0.76155	$\frac{1}{3}$	0.66304	0.60653	$k = \frac{1}{4}$ $F_X(x) = \begin{cases} 0 & x < 0 \\ \frac{1}{2}\sqrt{x} & 0 \leq x < 4 \\ 1 & x \geq 4 \end{cases}$ $\text{Var}[X] = \frac{64}{45}$ $P\left[\frac{16}{9} \leq X \leq 8\right] = \frac{1}{3}$ $E[\sqrt{X}] = 1$	$T_1 = 2\bar{X}_n - 4$ T_1 preferibile $n \geq 2$
F3	0.85429	$\frac{7}{24}$	0.96922	0.77880	$k = \frac{1}{6}$ $F_X(x) = \begin{cases} 0 & x < 0 \\ \frac{1}{3}\sqrt{x} & 0 \leq x < 9 \\ 1 & x \geq 9 \end{cases}$ $\text{Var}[X] = \frac{36}{5}$ $P[4 \leq X \leq 18] = \frac{1}{3}$ $E[\sqrt{X}] = \frac{3}{2}$	$T_1 = 2\bar{X}_n - 6$ T_1 preferibile $n \geq 2$
F4	0.53280	$\frac{3}{8}$	0.91296	0.60653	$k = 1$ $F_X(x) = \begin{cases} 0 & x < 0 \\ 2\sqrt{x} & 0 \leq x < \frac{1}{4} \\ 1 & x \geq \frac{1}{4} \end{cases}$ $\text{Var}[X] = \frac{1}{180}$ $P\left[\frac{1}{9} \leq X \leq \frac{1}{2}\right] = \frac{1}{3}$ $E[\sqrt{X}] = \frac{1}{4}$	$T_1 = 2\bar{X}_n - 8$ T_1 preferibile $n \geq 2$