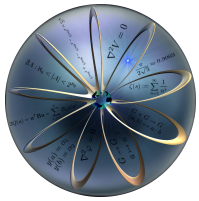

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Chebyshev's inequality

Canonical name	ChebyshevsInequality
Date of creation	2013-03-22 12:47:55
Last modified on	2013-03-22 12:47:55
Owner	rspuzio (6075)
Last modified by	rspuzio (6075)
Numerical id	6
Author	rspuzio (6075)
Entry type	Theorem
Classification	msc 60A99
Related topic	MarkovsInequality
Related topic	ChebyshevsInequality

Let $X \in \mathbf{L}^2$ be a real-valued random variable with mean $\mu = \mathbb{E}[X]$ and variance $\sigma^2 = \mathrm{Var}[X]$. Then for any standard of accuracy $t > 0$,

$$\mathbb{P}\left\{|X - \mu| \geq t\right\} \leq \frac{\sigma^2}{t^2}.$$

Note: There is another `http://planetmath.org/ChebyshevsInequality`Chebyshev's inequality, which is unrelated.