Scheffé's theorem

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Let $X, X_1, X_2, \ldots$ be continuous random variables in a probability space, whose probability density functions are $f, f_1, f_2, \ldots$, respectively. If $f_n \to f$ almost everywhere (relative to Lebesgue measure,) then X_n converges to X `http://planetmath.org/ConvergenceInDistribution`in distribution: $X_n \xrightarrow{D} X$.