Implementation of Stochastic Content Line in the Context of New Educational Standards

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Abstract: In the context of the introduction of updated educational standards for basic and secondary general education, the problem of selecting the content of mathematical (and, in particular, probabilistic-statistical) training and its methodological support has become urgent. The corresponding problem requires a solution in the system of additional professional education for mathematics teachers. The author's vision of the features of the content of stochastic training in the "School – University" system is presented. Some principles for selecting content are formulated. When studying probabilistic schemes, a priority consideration of the concept and properties of event algebra is proposed: a qualitative analysis of a stochastic situation should precede the choice of a probabilistic scheme and the calculation of the corresponding probabilities. The characteristic features and analysis of the hypothesis scheme and Bernoulli scheme are presented; some typical tasks are proposed. The methodological aspects of introducing concepts and facts related to the phenomenon of stochastic determinism (the concept of convergence in probability, the property of relative frequency stability, etc.) are considered. As methodological recommendations, the use of Laplace's integral theorem is proposed to substantiate Bernoulli's law of large numbers, as well as to consider the central limit theorem in its simplest version.