

Theme 3. Distribution laws and numerical characteristics of a discrete random variable.

1. A definition of a random variable.
2. Discrete random variables.
3. Distribution laws of probabilities for a random variable and ways of finding (tabular, graphic and analytical).
4. A distribution function of probabilities, its properties.
5. Basic numerical characteristics of a random variable.
6. A mathematical expectation.
7. A variance.
8. A root-mean-square deviation.
9. Properties of basic numerical characteristics.
10. Additional numerical characteristics of a distribution: a mode, a median, an excess.
11. Initial and central theoretical moments of an arbitrary order.
12. A calculation of numerical characteristics of a distribution of a random variable using its theoretical moments.
13. A definition of a continuous of a random variable.
14. A distribution density and its probable explanation.
15. A density function of a distribution of a random variable and its properties.
16. Distribution laws of a discrete random variable, which are used often social and economic phenomena.
17. A binomial distribution.
18. A geometrical distribution.
19. A hypergeometrical distribution.
20. Specificities and properties of these distributions, their basic numerical characteristics and the economic meaning.