
UNIVERSITY OF TEXAS AT AUSTINQuiz #2

The cumulative distribution function. Types of random variables.

Provide your **complete solution** to the following problems. Final answers only, without appropriate justification, will receive zero points even if correct.

Problem 2.1. (5 points) Write down the definition of the *cumulative distribution function* of a random variable.

Problem 2.2. (2 points) The cumulative distribution function is always strictly increasing. *True or false?*

Problem 2.3. (2 points) Please, sketch an example of a graph of the cumulative distribution function of a *continuous random variable*.

Problem 2.4. (2 points) Please, sketch an example of a graph of the cumulative distribution function of a *discrete random variable*.

Problem 2.5. (4 points) Please, sketch an example of a graph of the cumulative distribution function of a *mixed random variable*.