

Functions of Random Variables

Modeling Phenomena

Functions of RVs

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Modeling A System With Random Variables

Suppose that River U has two tributaries, River X and River Y with the following additional pieces of information:

- River X has a baseline volume that flows into River U (say, V_X)
- River Y has a baseline volume that flows into River U (say, V_Y)
- The volume flowing from each river could exceed the baseline
- The volume flowing from River X and River Y are not related
- If the volume flowing into River U from the two tributaries exceeds M , River U will overflow

Model this system and determine a formula for the probability that River U will overflow.