Quick Review

Given joint CDF, can we find joint pdf?

Given \( f_{x_1}(u,v) \)...

Specify probability density instead of mass

Jointly Continuous RV's

For \( X+Y \) RV's, if \( (X,Y) \) can take any value in some region, then \( X \) and \( Y \) are jointly continuous.

As before:

\[
F_{X,Y}(x,y) = P\{X \leq x, Y \leq y\}
\]

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Example

The marginals for X & Y

Uniform density

Specific example

Summary