CSCE 317 Spring 2018

Quiz 2

Assigned Tuesday, 18-02-06

Complete the following sentence. Events X and Y are conditionally independent given event Z if:

Answer: Any of these three is good:

$P\{X, Y|Z\} = P\{X|Z\}P\{Y|Z\}$

$P\{X|Y, Z\} = P\{X|Z\}$

$P\{Y|X, Z\} = P\{Y|Z\}$

Here are the definitions of five kinds of variables: algebraic variables, random variables, propositional variables, variables in an imperative programming language (e.g., C), and variables in first-order logic. Which one is which?

1. An element of the domain of discourse **Answer:** first-order
2. A real-valued function of the outcome of an experiment **Answer:** random
3. {true, false} **Answer:** propositional
4. A named and sometimes typed sequence of bits in memory **Answer:** programming language
5. A number **Answer:** algebraic