In-Video Quiz Questions for
Unit 2: Part 1 – (Spotlight) Disjoint vs. independent

(02:17)

1. Which of the following is true? Assume a fair coin.
   (a) Outcomes of one coin toss are disjoint and independent; outcomes of two coin tosses are dependent.
   (b) Outcomes of one coin toss are disjoint and dependent; outcomes of two coin tosses are independent.
   (c) Outcomes of one coin toss are disjoint and dependent; outcomes of two coin tosses are also dependent.

Answers:

1. b

Explanation: For a single coin toss, if we know that it's heads, then we know that it's not tails, hence dependent. For two consecutive coin tosses, knowing the result of the first toss does not tell us anything about the result of the second toss, hence independent.