Question 1

(1/1 point)

True or false: The binomial distribution describes the number of successes in n trials where in each trial several outcomes, each of which are equally likely.

a. True

b. False ✔

EXPLANATION

This is false. The binomial distribution describes the number of successes in n trials where in each of the trials there is a binary outcome (usually classified as “success” or “failure”). Furthermore, the “success” and “failure” outcomes are not required to be equally likely. In the Steph Curry example given in class, the outcome of each three-point attempt is either that he makes the three-point shot (success) or does not make the three-point shot attempt (failure). It is not assumed that making or missing each shot is equally likely.

▸ Exit Survey

You have used 1 of 1 submissions

Question 2

(1/1 point)

Let's do an example similar to the one described in class. Suppose that you will take 3 penalty kicks in a row. The likelihood of making each penalty kick is ¾ or 75%. What is the probability that you will score 2 (and only 2) of the 3 penalty kicks?

- a. 0.42 or 42% ✔
- b. 0.56 or 56%
- c. 0.75 or 75%
- d. 0.84 or 84%

EXPLANATION

Using the binomial distribution equation,

$$p(2\ out\ of\ 3) = \binom{n}{x} p^x (1-p)^{(n-x)}$$

$$p(2\ out\ of\ 3) = \binom{3}{2} 0.75^2 (1-0.75)^{(3-2)}$$

$$p(2\ out\ of\ 3) = 0.42\ or\ 42\%$$

You have used 1 of 2 submissions

© All Rights Reserved

© 2016 edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open EdX logos are registered trademarks or trademarks of edX Inc.

POWERED BY OPENedX

Download on the
App Store
ANDROID APP ON
Google play