Data Analysis and Statistical Inference
Dr. Çetinkaya-Rundel
Duke University

In-Video Quiz Questions for
Unit 2: Part 4 – (2) Normal Approximation to Binomial

(14:03) – slide 8, after "So the answer is, we need at least forty observations for a binomial distribution with p equals 0.25, to closely follow a normal distribution."

1. Below are four pairs of Binomial distribution parameters. Which distribution can be approximated by the normal distribution?

(a) n=100, p=0.95

(b) n=25, p=0.45

(c) n=150, p=0.05

(d) n = 500, p = 0.015

Data Analysis and Statistical Inference
Dr. Çetinkaya-Rundel
Duke University

Answers:

1. b

Explanation: n=100, p=0.95: np = 95, n(1-p) = 5
n=25, p=0.45; np = 11.25, n(1-p) = 13.75
n=150, p=0.05; np = 7.5
n = 500, p = 0.015; np = 7.5