Watch. Practice. Understand. | Lesson 145

Chapter 10 Review Compounded Events, Independent and Dependent, Conditioning Probability

Watch the matching video: https://www.youtube.com/watch?v=VdS7j-IWAIk

Practice focus: Conditional and dependent probability

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 A bag has 5 red and 3 blue counters. Find P(two red without replacement).

02 Find P(two red with replacement) from the same bag.

03 Of 40 students, 18 play music, 12 play sports, and 6 do both. Find P(music given sports).

04 If P(A) = 0.6, P(B) = 0.5 and P(A and B) = 0.4, are the events independent?

Worked answers | Lesson 145

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01 A bag has 5 red and 3 blue counters. Find P(two red without replacement).

(5/8)(4/7) = 5/14; the second probability changes after the first draw.

02 Find P(two red with replacement) from the same bag.

$(5/8)^2 = 25/64$; replacement makes the draws independent.

03 Of 40 students, 18 play music, 12 play sports, and 6 do both. Find P(music given sports).

Among 12 sports students, 6 play music: 6/12 = 1/2.

04 If P(A) = 0.6, P(B) = 0.5 and P(A and B) = 0.4, are the events independent?

No. Independence would require 0.6(0.5) = 0.3, which differs from 0.4.