

Algebra II Honors 10 2 Independent and Dependent Events

Lesson 127 | Algebra II | Conditional and dependent probability

<https://www.youtube.com/watch?v=vxZwy62wPI4>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

A bag has 3 red and 11 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

02

A bag has 4 red and 11 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

03

A bag has 5 red and 7 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

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Name: _____ Date: _____ Show your reasoning.

04

A bag has 12 red and 4 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

05

A bag has 10 red and 13 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

06

A bag has 6 red and 3 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

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01

A bag has 3 red and 11 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

$P(RR) = (3/14) \cdot (2/13) = 3/91$. Given first blue, 3 red among 13 remain: $3/13$.

02

A bag has 4 red and 11 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

$P(RR) = (4/15) \cdot (3/14) = 2/35$. Given first blue, 4 red among 14 remain: $2/7$.

03

A bag has 5 red and 7 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

$P(RR) = (5/12) \cdot (4/11) = 5/33$. Given first blue, 5 red among 11 remain: $5/11$.

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04

A bag has 12 red and 4 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

$P(RR) = (12/16) \cdot (11/15) = 11/20$. Given first blue, 12 red among 15 remain: $4/5$.

05

A bag has 10 red and 13 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

$P(RR) = (10/23) \cdot (9/22) = 45/253$. Given first blue, 10 red among 22 remain: $5/11$.

06

A bag has 6 red and 3 blue counters. Draw twice without replacement. Find $P(\text{both red})$ and $P(\text{second red} \mid \text{first blue})$.

$P(RR) = (6/9) \cdot (5/8) = 5/12$. Given first blue, 6 red among 8 remain: $3/4$.