11-3 Standardized Test Prep

Probability of Multiple Events

Multiple Choice

For Exercises 1–4, choose the correct letter.

A store display shows two red shirts, one blue shirt, and three shirts with red and white stripes. The display also shows two pairs of blue jeans, one pair of white pants, and one pair of white shorts.

1. What is the probability of randomly selecting an item with white or red on it?

   Ⓐ $\frac{1}{4}$ Ⓑ $\frac{3}{10}$ Ⓒ $\frac{1}{2}$ Ⓓ $\frac{7}{10}$

2. What is the probability of randomly selecting two items and getting a pair of blue jeans, putting them back in the display, and then randomly selecting a blue shirt?

   Ⓕ $\frac{1}{50}$ Ⓖ $\frac{1}{45}$ Ⓗ $\frac{2}{10}$ Ⓘ $\frac{3}{10}$

3. What is the probability of randomly selecting a complete outfit (one shirt and one pair of jeans, pants, or shorts) on two picks?

   Ⓐ $\frac{1}{24}$ Ⓑ $\frac{1}{5}$ Ⓒ $\frac{6}{25}$ Ⓓ $\frac{4}{15}$

4. What is the probability of selecting an item with red or blue on it?

   Ⓕ $\frac{3}{20}$ Ⓖ $\frac{3}{10}$ Ⓗ $\frac{3}{5}$ Ⓘ $\frac{4}{5}$

Short Response

5. There is a 50% chance of thunderstorms on Monday, a 50% chance on Tuesday, and a 50% chance on Wednesday. Assume these are independent events. What is the probability that there will be thunderstorms on Monday, Tuesday, and Wednesday? Show your work.