

SAMPLE ITEMS

1. In a particular state, the first character on a license plate is always a letter. The last character is always a digit from 0 to 9.

If V represents the set of all license plates beginning with a vowel, and O represents the set of all license plates that end with an odd number, which license plate belongs to the set V and O' ?



Correct Answer: A

2. For which set of probabilities would events A and B be independent?

- A. $P(A) = 0.25$; $P(B) = 0.25$; $P(A \text{ and } B) = 0.5$
 B. $P(A) = 0.08$; $P(B) = 0.4$; $P(A \text{ and } B) = 0.12$
 C. $P(A) = 0.16$; $P(B) = 0.24$; $P(A \text{ and } B) = 0.32$
 D. $P(A) = 0.3$; $P(B) = 0.15$; $P(A \text{ and } B) = 0.045$

Correct Answer: D

3. Assume that the following events are independent:

- The probability that a high school senior will go to college is 0.72.
- The probability that a high school senior will go to college and live on campus is 0.46.

What is the probability that a high school senior will live on campus, given that the person will go to college?

- A. 0.26
- B. 0.33
- C. 0.57
- D. 0.64

Correct Answer: D

4. A random survey was conducted about gender and hair color. This table records the data.

	Brown	Blonde	Red	Total
Male	548	876	82	1,506
Female	612	716	66	1,394
Total	1,160	1,592	148	2,900

What is the probability that a randomly selected person has blonde hair, given that the person selected is male?

- A. 0.51
- B. 0.55
- C. 0.58
- D. 0.63

Correct Answer: C