Assignment 32

Nathan Allen

November 2020

1   a

(a) *The probability of getting exactly 1 ace after drawing 5 cards from a deck is equal to 5 times the probability of getting 1 ace in the first draw.*

$$5 * \frac{4}{52} * \frac{48}{51} * \frac{47}{50} * \frac{46}{49} * \frac{45}{48}$$

$$= \frac{3243}{10829}$$

(b) *The probability of getting a least one ace is equal to 1 minus the probability of not getting an ace which is*

$$1 - \frac{48}{52} * \frac{47}{51} * \frac{46}{50} * \frac{45}{49} * \frac{44}{48}$$

$$= \frac{18472}{54145}$$

2   b

(a) *The probability of rolling a dice 5 times and not getting a repeated result is equal to*

$$1 - \frac{6}{6} * \frac{5}{6} * \frac{4}{6} * \frac{3}{6} * \frac{2}{6}$$

$$= \frac{49}{54}$$