



Question 27:

Total number of all possible outcomes = 52

$$(i) P(\text{getting an ace}) = \frac{4}{52} = \frac{1}{13}$$

$$(ii) P(\text{getting a '4' of spades}) = \frac{1}{52}$$

$$(iii) P(\text{a '9' of a black suit}) = \frac{2}{52} = \frac{1}{26}$$

$$(iv) P(\text{getting a red king}) = \frac{2}{52} = \frac{1}{26}$$

Question 28:

Total numbers of cards = 52

(i) There are 4 queen cards in a pack of cards

$$\therefore \text{Probability of getting a queen card} = \frac{4}{52} = \frac{1}{13}$$

(ii) There are 13 cards of diamond in a pack of cards

$$\therefore \text{probability of getting a diamond card} = \frac{13}{52} = \frac{1}{4}$$

(iii) In a pack of cards there are 4 kings and 4 aces

Number of such cards =  $4 + 4 = 8$

$$\text{Probability of getting either a king or an ace} = \frac{8}{52} = \frac{2}{13}$$

(iv) There are two red aces in a pack of cards

$$\therefore \text{probability of getting a red ace} = \frac{2}{52} = \frac{1}{26}$$

Question 29:

There are 26 red cards containing 12 queens and 14 more black queens are there in a pack of cards

$$\therefore P(\text{getting a red card or a queen}) = \frac{28}{52} = \frac{7}{13}$$

$$\therefore P(\text{getting neither a red card nor a queen}) = \left(1 - \frac{7}{13}\right) = \frac{6}{13}$$

Question 30:

Total number of cards = 52

There are 4 queens and 4 jacks in a pack of cards.

$$\therefore P(\text{either a queen or a jack}) = \frac{8}{52} = \frac{2}{13}$$

$$\therefore P(\text{neither a queen nor a jack}) = \left(1 - \frac{2}{13}\right) = \frac{11}{13}$$

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