Conditional Probability & Independent Events · 1

A bag has 8 red, 3 blue and 2 green marbles. Two marbles are drawn one after the other without replacement. Find the probability that the first is blue and the second is green.

Conditional Probability & Independent Events · 2

$P(A \text{ and } B) = \frac{1}{18}$ and $P(B) = \frac{1}{6}$. Find $P(A \mid B)$.

Conditional Probability & Independent Events · 3

$P(A) = \frac{1}{2}$, $P(B) = \frac{3}{5}$ and $P(A \text{ and } B) = \frac{3}{10}$. Are A and B independent? Write yes or no.

Conditional Probability & Independent Events · 4

$P(A) = \frac{7}{8}$, $P(B) = \frac{5}{8}$ and $P(A \text{ and } B) = \frac{13}{24}$. Find $P(A \text{ or } B)$.

Conditional Probability & Independent Events · 5

$P(A) = \frac{2}{3}$ and $P(B \mid A) = \frac{4}{5}$. Find $P(A \text{ and } B)$.

Conditional Probability & Independent Events · 6

One card is drawn from a standard deck of 52 cards. Find the probability that it is a face card (jack, queen or king) or a club.

Conditional Probability & Independent Events · 7

$P(A) = \frac{2}{3}$, $P(B) = \frac{1}{2}$ and $P(A \text{ and } B) = \frac{1}{6}$. Are A and B independent? Write yes or no.

Conditional Probability & Independent Events · 8

A bag has 8 red, 3 blue and 4 green marbles. Two marbles are drawn one after the other without replacement. Find the probability that both marbles are blue.

Conditional Probability & Independent Events · 2

ANSWER

$\frac{1}{3}$

Conditional Probability & Independent Events · 1

ANSWER

$\frac{1}{26}$

Conditional Probability & Independent Events · 4

ANSWER

$\frac{23}{24}$

Conditional Probability & Independent Events · 3

ANSWER

yes

Conditional Probability & Independent Events · 6

ANSWER

$\frac{11}{26}$

Conditional Probability & Independent Events · 5

ANSWER

$\frac{8}{15}$

Conditional Probability & Independent Events · 8

ANSWER

$\frac{1}{35}$

Conditional Probability & Independent Events · 7

ANSWER

no

Conditional Probability & Independent Events · 9

$P(A \text{ and } B) = \frac{1}{12}$ and $P(B) = \frac{1}{2}$. Find $P(A \mid B)$.

Conditional Probability & Independent Events · 10

$P(A) = \frac{1}{3}$, $P(B) = \frac{1}{3}$ and $P(A \text{ and } B) = \frac{2}{9}$. Are A and B independent? Write yes or no.

Conditional Probability & Independent Events · 11

$P(A) = \frac{1}{3}$, $P(B) = \frac{1}{3}$ and $P(A \text{ and } B) = \frac{4}{15}$. Find $P(A \text{ or } B)$.

Conditional Probability & Independent Events · 12

$P(A) = \frac{2}{5}$ and $P(B \mid A) = \frac{2}{3}$. Find $P(A \text{ and } B)$.

Conditional Probability & Independent Events · 13

One card is drawn from a standard deck of 52 cards. Find the probability that it is a king or a heart.

Conditional Probability & Independent Events · 14

$P(A) = \frac{5}{6}$, $P(B) = \frac{1}{6}$ and $P(A \text{ and } B) = \frac{5}{36}$. Are A and B independent? Write yes or no.

Conditional Probability & Independent Events · 15

A bag has 4 red, 6 blue and 6 green marbles. Two marbles are drawn one after the other without replacement. Find the probability that the first is blue and the second is red.

Conditional Probability & Independent Events · 16

$P(A \text{ and } B) = \frac{1}{5}$ and $P(B) = \frac{1}{3}$. Find $P(A \mid B)$.

Conditional Probability & Independent Events · 10

ANSWER

no

Conditional Probability & Independent Events · 9

ANSWER

$$\frac{1}{6}$$

Conditional Probability & Independent Events · 12

ANSWER

$$\frac{4}{15}$$

Conditional Probability & Independent Events · 11

ANSWER

$$\frac{2}{5}$$

Conditional Probability & Independent Events · 14

ANSWER

yes

Conditional Probability & Independent Events · 13

ANSWER

$$\frac{4}{13}$$

Conditional Probability & Independent Events · 16

ANSWER

$$\frac{3}{5}$$

Conditional Probability & Independent Events · 15

ANSWER

$$\frac{1}{10}$$

$P(A) = \frac{2}{3}$, $P(B) = \frac{2}{5}$ and $P(A \text{ and } B) = \frac{4}{15}$. Are A and B independent? Write yes or no.

$P(A) = \frac{1}{4}$, $P(B) = \frac{1}{2}$ and $P(A \text{ and } B) = \frac{1}{12}$. Find $P(A \text{ or } B)$.

$P(A) = \frac{3}{5}$ and $P(B \mid A) = \frac{1}{3}$. Find $P(A \text{ and } B)$.

One card is drawn from a standard deck of 52 cards. Find the probability that it is a jack or a red card.

$P(A) = \frac{1}{4}$, $P(B) = \frac{2}{5}$ and $P(A \text{ and } B) = \frac{1}{20}$. Are A and B independent? Write yes or no.

A bag has 4 red, 7 blue and 5 green marbles. Two marbles are drawn one after the other without replacement. Find the probability that both marbles are green.

$P(A \text{ and } B) = \frac{1}{4}$ and $P(B) = \frac{1}{2}$. Find $P(A \mid B)$.

$P(A) = \frac{5}{6}$, $P(B) = \frac{4}{5}$ and $P(A \text{ and } B) = \frac{7}{10}$. Are A and B independent? Write yes or no.

Conditional Probability & Independent Events · 18

ANSWER

$\frac{2}{3}$

Conditional Probability & Independent Events · 17

ANSWER

yes

Conditional Probability & Independent Events · 20

ANSWER

$\frac{7}{13}$

Conditional Probability & Independent Events · 19

ANSWER

$\frac{1}{5}$

Conditional Probability & Independent Events · 22

ANSWER

$\frac{1}{12}$

Conditional Probability & Independent Events · 21

ANSWER

no

Conditional Probability & Independent Events · 24

ANSWER

no

Conditional Probability & Independent Events · 23

ANSWER

$\frac{1}{2}$