



MATHS

BOOKS - INDEPENDENTLY PUBLISHED

MATHS (ENGLISH)

PROBABILITY

Examples

1. If a card is drawn from a standard deck of 52 cards, what is the probability of the

event that the card is a picture card ? What is the probability of the event that the card is a spade ?



Watch Video Solution

2. If a coin is flipped twice , what is the probability of the event I head and I tail ?



Watch Video Solution

3. What is the probability of getting a sum of 7 when two dice are thrown ?



[Watch Video Solution](#)

4. In a group of 40 students , 23 take the AP Psychology class , 18 take the AP Calculas class, and 8 take both classes . What is the probability that a student takes AP Psychology or AP Calculus ?



[Watch Video Solution](#)

5. In a throw of two dice , what is the probability of getting a 7 or 11 ?



[Watch Video Solution](#)

6. If you draw two marbles in sequence from a bowl with 10 black and 4 yellow marbles Itbr. And replace the first marvle before packing the second , what is the probability that both marbles are yellow ?



[Watch Video Solution](#)

7. The scenario is the same as in example F , but this time , the first marble picked is not replaced . What is the probability that both marbles are yellow ?



[Watch Video Solution](#)

8. If the probability that John will buy a certain product is $\frac{3}{5}$, that Bill will buy that product is $\frac{2}{3}$. And that Sue will buy that

product is $\frac{1}{4}$, and if their decisions to buy are independent, what is the probability that at least one of them will buy the product?



[Watch Video Solution](#)

9. Two dice are thrown. Event A is "the sum of the two dice is 7" and Event B is "at least one die is 6." Are A and B independent?



[View Text Solution](#)

10. If a card is drawn from a standard deck of 52 cards, what is the probability of the event that the card is a picture card? What is the probability of the event that the card is a spade?



Watch Video Solution

11. If a coin is flipped twice, what is the probability of the event 1 head and 1 tail?



Watch Video Solution

12. What is the probability of getting a sum of 7 when two dice are thrown ?



Watch Video Solution

13. In a group of 40 students , 23 take the AP Psychology class , 18 take the AP Calculus class, and 8 take both classes . What is the probability that a student takes AP Psychology or AP Calculus ?



Watch Video Solution

14. In a throw of two dice , what is the probability of getting a 7 or 11 ?



Watch Video Solution

15. If you draw two marbles in sequence from a bowl with 10 black and 4 yellow marbles and replace the first marble before picking the second, what is the probability that both marbles are yellow ?



[Watch Video Solution](#)

16. If you draw two marbles in sequence from a bowl with 10 black and 4 yellow marbles and the first marble picked is not replaced, what is the probability that both marbles are yellow ?



[Watch Video Solution](#)

17. If the probability that John will buy a certain product is $\frac{3}{5}$, that Bill will buy that product is $\frac{2}{3}$. And that Sue will buy that

product is $\frac{1}{4}$, and if their decisions to buy are independent, what is the probability that at least one of them will buy the product?



[Watch Video Solution](#)

18. Two dice are thrown. Event A is "the sum of the two dice is 7" and Event B is "at least one die is 6." Are A and B independent?



[Watch Video Solution](#)

Exercises

1. With the throw of two dice, what is the probability that the sum will be a prime number?

A. $\frac{4}{11}$

B. $\frac{7}{18}$

C. $\frac{5}{12}$

D. $\frac{5}{11}$

Answer: C



Watch Video Solution

2. If a coin is flipped and one die is thrown, what is the probability of getting a head or a 4?

A. $\frac{1}{12}$

B. $\frac{1}{3}$

C. $\frac{5}{12}$

D. $\frac{7}{12}$

Answer: D



Watch Video Solution

3. Three cards are drawn from an ordinary deck of 52 cards. Each card is replaced in the deck before the next card is drawn. What is the probability that at least one of the cards will be a spade?

A. $\frac{3}{12}$

B. $\frac{9}{64}$

C. $\frac{3}{8}$

D. $\frac{37}{64}$

Answer: D



View Text Solution

4. A coin is tossed three times. Let $A = \{\text{three heads occur}\}$ and $B = \{\text{at least one head occurs}\}$.

What is $P(A \cup B)$?

A. $\frac{1}{8}$

B. $\frac{1}{4}$

C. $\frac{1}{2}$

D. $\frac{7}{8}$

Answer: D



Watch Video Solution

5. A class has 12 boys and 4 girls. If three students are selected at random from the class,

what is the probability that all will be boys?

A. $\frac{1}{55}$

B. $\frac{1}{4}$

C. $\frac{1}{3}$

D. $\frac{11}{28}$

Answer: D



Watch Video Solution

6. A red box contains eight items, of which three are defective, and a blue box contains five

items, of which two are defective. An item is drawn at random from each box. What is the probability that both items will be nondefective?

A. $\frac{3}{20}$

B. $\frac{3}{8}$

C. $\frac{5}{13}$

D. $\frac{8}{13}$

Answer: B



Watch Video Solution

7. A hotel has five single room available, for which six men and three women apply.

What is the probability that the rooms will be rented to three men and two women ?

A. $\frac{23}{112}$

B. $\frac{97}{251}$

C. $\frac{10}{21}$

D. $\frac{5}{9}$

Answer: C



8. Of all the articles in a box, 80% are satisfactory, while 20% are not. The probability of obtaining exactly five good items out of eight randomly selected articles is

A. 0.003

B. 0.013

C. 0.132

D. 0.147

Answer: D



View Text Solution

9. With the throw of two dice, what is the probability that the sum will be a prime number?

A. $\frac{4}{11}$

B. $\frac{7}{18}$

C. $\frac{5}{12}$

D. $\frac{5}{11}$

Answer: C



Watch Video Solution

10. If a coin is flipped and one die is thrown, what is the probability of getting a head or a 4?

A. $\frac{1}{12}$

B. $\frac{1}{3}$

C. $\frac{5}{12}$

D. $\frac{7}{12}$

Answer: D



Watch Video Solution

11. Three cards are drawn from an ordinary deck of 52 cards. Each card is replaced in the deck before the next card is drawn. What is the probability that at least one of the cards will be a spade?

A. $\frac{3}{12}$

B. $\frac{9}{64}$

C. $\frac{3}{8}$

D. $\frac{37}{64}$

Answer: D



Watch Video Solution

12. A coin is tossed three times. Let $A = \{\text{three heads occur}\}$ and $B = \{\text{at least one head occurs}\}$.

What is $P(A \cup B)$?

A. $\frac{1}{8}$

B. $\frac{1}{4}$

C. $\frac{1}{2}$

D. $\frac{7}{8}$

Answer: D



Watch Video Solution

13. A class has 12 boys and 4 girls. If three students are selected at random from the

class,

what is the probability that all will be boys?

A. $\frac{1}{55}$

B. $\frac{1}{4}$

C. $\frac{1}{3}$

D. $\frac{11}{28}$

Answer: D



Watch Video Solution

14. A red box contains eight items, of which three are defective, and a blue box contains five items, of which two are defective. An item is drawn at random from each box. What is the probability that both items will be nondefective?

A. $\frac{3}{20}$

B. $\frac{3}{8}$

C. $\frac{5}{13}$

D. $\frac{8}{13}$

Answer: B



Watch Video Solution

15. A hotel has five single room available, for which six men and three women apply.

What is the probability that the rooms will be rented to three men and two women ?

A. $\frac{23}{112}$

B. $\frac{97}{251}$

C. $\frac{10}{21}$

D. $\frac{5}{9}$

Answer: C



Watch Video Solution

16. Of all the articles in a box, 80% are satisfactory, while 20% are not. The probability of

of

obtaining exactly five good items out of eight randomly selected articles is

A. 0.003

B. 0.013

C. 0.132

D. 0.147

Answer: D



Watch Video Solution