

**GS FOUNDATION (2023-24) WORKSHEET 10**  
**&**  
**CSAT FOUNDATION 1.0 (2023-24) WORKSHEET 11**  
**WORKSHEET 19 PROBABILITY**

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A special deck of 16 cards has 4 that are blue, 4 yellow, 4 green, and 4 red. The four cards of each colour are numbered from one to four. A single card is drawn at random. Define events

B: the card is blue

R: the card is red

N: the number on the card is at most two

Assume all outcomes are equally likely.

1. What is  $P(B \cup R)$ ?

- A. 0.66
- B. 0.5
- C. 0.4
- D. 0.8

2. What is  $P(N \cup R)^c - P(B)$

- A.  $\frac{3}{8}$
- B.  $\frac{1}{4}$
- C.  $\frac{5}{8}$
- D.  $\frac{1}{2}$

3. An accountant has observed that 5% of all copies of a particular two-part form have an error in Part I, and 2% have an error in Part II. If the errors occur independently, find the probability that a randomly selected form will be error-free.

- A. 0.92
- B. 0.93
- C. 0.94
- D. 0.947

4. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

- A.  $\frac{1}{2}$
- B.  $\frac{3}{8}$
- C.  $\frac{9}{20}$
- D.  $\frac{5}{9}$

5. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green?

- A.  $\frac{1}{2}$
- B.  $\frac{4}{9}$
- C.  $\frac{2}{3}$
- D.  $\frac{1}{3}$

6. From a pack of 52 cards, two cards are drawn together at random. What is the probability of both the cards being kings?

- A.  $\frac{3}{433}$
- B.  $\frac{55}{2344}$
- C.  $\frac{1}{221}$
- D.  $\frac{2}{52}$

7. Two dice are tossed. The probability that the total score is a prime number is

- A.  $\frac{1}{4}$
- B.  $\frac{5}{12}$
- C.  $\frac{7}{12}$
- D.  $\frac{1}{3}$

8. A box contains 20 screws which are identical in size, but 12 of which are zinc coated and 8 of which are not. Two screws are selected at random, without replacement. Find the probability that at least one is zinc coated.

- A.  $\frac{34}{47}$
- B.  $\frac{33}{67}$
- C.  $\frac{47}{60}$
- D.  $\frac{81}{95}$

9. A card is drawn from a pack of 52 cards. The probability of getting a queen of club or a king of heart is

- A.  $\frac{1}{13}$
- B.  $\frac{1}{26}$
- C.  $\frac{5}{17}$
- D.  $\frac{2}{19}$

10. One card is drawn at random from a pack of 52 cards. What is the probability that the card drawn is a face card?

- A.  $\frac{1}{13}$
- B.  $\frac{2}{13}$
- C.  $\frac{3}{13}$
- D.  $\frac{3}{26}$

11. A bag contains 6 black and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?

- A.  $\frac{1}{2}$
- B.  $\frac{3}{7}$
- C.  $\frac{4}{7}$
- D.  $\frac{5}{8}$

Solutions:

- 1. B
- 2. A
- 3. B
- 4. C
- 5. D
- 6. C
- 7. B
- 8. D
- 9. B
- 10. C
- 11. C