

**MATHEMATICS****CLASS 9***Chapter 7: The Mathematics of Maybe (Introduction to Probability)***WORKSHEET**

Name: \_\_\_\_\_

Class/Section: \_\_\_\_\_

Date: \_\_\_\_\_

**Instructions:**

1. This worksheet contains 25 Multiple Choice Questions (MCQs) covering Chapter 7.
2. Read each question carefully and select the single correct option (A, B, C, or D).
3. An Answer Key table along with short explanations is provided at the end of the document.

**Q1. What is the probability of an event that is certain to happen?**

- (a) 0 (b) 0.5  
(c) 1 (d) -1

**2. What is the probability of an impossible event?**

- (a) 0 (b) 0.5  
(c) 1 (d) Infinite

**3. The sum of the probabilities of all the elementary events of an experiment is:**

- (a) 0 (b) 0.5  
(c) 1 (d) 2

**4. Which of the following cannot be the probability of an event?**

- (a)  $\frac{1}{3}$  (b) 0.8  
(c) 15% (d) -1.5

**5. A fair coin is tossed. What is the probability of getting a Head?**

- (a) 0 (b)  $\frac{1}{4}$   
(c)  $\frac{1}{2}$  (d) 1

6. A six-sided die is rolled once. What is the probability of getting a number greater than 4?

- (a)  $1/6$  (b)  $1/3$   
(c)  $1/2$  (d)  $2/3$

7. If the probability of winning a game is 0.3, what is the probability of losing it?

- (a) 0.3 (b) 0.5  
(c) 0.7 (d) 1.0

8. A bag contains 3 red marbles and 7 blue marbles. What is the probability of drawing a red marble randomly?

- (a)  $3/10$  (b)  $7/10$   
(c)  $3/7$  (d)  $1/3$

9. When two coins are tossed simultaneously, what is the total number of possible outcomes?

- (a) 2 (b) 3  
(c) 4 (d) 8

10. What is the sample space for rolling a single 6-sided die?

- (a) {H, T} (b) {1, 2, 3}  
(c) {1, 2, 3, 4, 5, 6} (d) {2, 4, 6}

11. In the word 'PROBABILITY', what is the probability of choosing a vowel randomly?

- (a)  $4/11$  (b)  $3/11$   
(c)  $5/11$  (d)  $4/10$

12. Which of these pairs of events are equally likely?

- (a) Rolling a 6 or rolling an odd number on a die  
(b) Getting Heads or getting Tails on a fair coin toss  
(c) Drawing a red card or a spade from a standard deck  
(d) Winning or drawing a chess match against a grandmaster

13. An integer is chosen at random between -2 and 2 (inclusive). What is the probability that it is positive?

- (a)  $\frac{2}{5}$  (b)  $\frac{3}{5}$   
(c)  $\frac{1}{2}$  (d)  $\frac{1}{5}$

14. A die is rolled. What is the probability of getting an even prime number?

- (a)  $\frac{1}{6}$  (b)  $\frac{1}{3}$   
(c)  $\frac{1}{2}$  (d) 0

15. If  $P(E) = 0.05$ , then what is  $P(\text{not } E)$ ?

- (a) 0.05 (b) 0.95  
(c) 0.5 (d) 0.005

16. Out of 50 students surveyed, 15 like football. What is the relative frequency (probability) of choosing a student who likes football?

- (a) 0.15 (b) 0.25  
(c) 0.3 (d) 0.5

17. A coin and a die are tossed together. How many outcomes are there in the sample space?

- (a) 8 (b) 12  
(c) 6 (d) 2

18. In a village fair, there are 3 snacks (Samosa, Pakora, Bhaji) and 2 drinks (Chai, Lassi). How many combinations of one snack and one drink are possible?

- (a) 5 (b) 6  
(c) 9 (d) 2

19. A die has been rolled 8 times and resulted in a '4' each time. What is the probability of getting a '4' on the ninth roll?

- (a) 0 (b)  $\frac{1}{6}$   
(c)  $\frac{8}{6}$  (d) 1

20. Which term refers to the fact that past outcomes do not affect the probabilities of future independent events?

(a) Sample Space

(b) Experimental probability

(c) Independent Event

(d) Favourable outcome

21. A card is drawn from a well-shuffled deck of 52 cards. What is the probability of drawing an Ace?

(a)  $1/52$ (b)  $1/13$ (c)  $4/13$ (d)  $1/4$ 

22. There are 600 sweets in a bag. A sample of 30 sweets contains 7 yellow ones. Estimate the total number of yellow sweets in the bag.

(a) 70

(b) 140

(c) 210

(d) 100

23. Which of the following is considered a random experiment?

(a) Heating water to 100 degrees Celsius

(b) Dropping a stone from a height

(c) Tossing a coin

(d) Adding 2 and 2

24. The probability of getting exactly two heads when two coins are tossed is:

(a)  $\frac{1}{4}$ (b)  $\frac{1}{2}$ (c)  $\frac{3}{4}$ 

(d) 1

25. Event A is 'It will snow in Mumbai in July'. What label best describes this event?

(a) Certain

(b) More likely

(c) Less likely

(d) Impossible

## Answer Key

| Question No. | Correct Answer                                         |
|--------------|--------------------------------------------------------|
| 1            | (c) 1                                                  |
| 2            | (a) 0                                                  |
| 3            | (c) 1                                                  |
| 4            | (d) -1.5                                               |
| 5            | (c) $1/2$                                              |
| 6            | (b) $1/3$                                              |
| 7            | (c) 0.7                                                |
| 8            | (a) $3/10$                                             |
| 9            | (c) 4                                                  |
| 10           | (c) {1, 2, 3, 4, 5, 6}                                 |
| 11           | (a) $4/11$                                             |
| 12           | (b) Getting Heads or getting Tails on a fair coin toss |
| 13           | (a) $2/5$                                              |
| 14           | (a) $1/6$                                              |
| 15           | (b) 0.95                                               |
| 16           | (c) 0.3                                                |
| 17           | (b) 12                                                 |
| 18           | (b) 6                                                  |
| 19           | (b) $1/6$                                              |
| 20           | (c) Independent Event                                  |
| 21           | (b) $1/13$                                             |
| 22           | (b) 140                                                |
| 23           | (c) Tossing a coin                                     |
| 24           | (a) $1/4$                                              |
| 25           | (d) Impossible                                         |