

**EduSahara™ Learning Center Assignment****Grade : Class X, SSC****Chapter : Probability****Name : Probability Concepts**

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1. What is the probability of a sure event?

- (i)  $\frac{1}{2}$  (ii)  $\frac{3}{4}$  (iii) 1 (iv) 0 (v)  $\frac{1}{4}$
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2. What is the probability of an impossible event?

- (i)  $\frac{1}{2}$  (ii) 0 (iii) 1 (iv)  $\frac{3}{4}$  (v)  $\frac{1}{4}$
- 

3. There are 64 students in a class room of whom 28 are boys and 36 are girls. From these students, one is chosen at random. What is the probability that the chosen student is a boy ?

- (i)  $\frac{9}{16}$  (ii)  $\frac{3}{8}$  (iii)  $\frac{7}{16}$  (iv)  $\frac{1}{2}$  (v)  $\frac{8}{17}$
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4. There are 52 students in a class room of whom 30 are boys and 22 are girls. From these students, one is chosen at random. What is the probability that the chosen student is a girl ?

- (i)  $\frac{5}{13}$  (ii)  $\frac{4}{9}$  (iii)  $\frac{15}{26}$  (iv)  $\frac{6}{13}$  (v)  $\frac{11}{26}$
- 

5. In a lottery, there are 24 prizes and 11 blanks. What is the probability of getting a prize?

- (i)  $\frac{23}{35}$  (ii)  $\frac{25}{36}$  (iii)  $\frac{24}{35}$  (iv)  $\frac{11}{35}$  (v)  $\frac{5}{7}$
- 

6. In a lottery, there are 29 prizes and 17 blanks. What is the probability of not getting a prize?

- (i)  $\frac{8}{23}$  (ii)  $\frac{29}{46}$  (iii)  $\frac{18}{47}$  (iv)  $\frac{17}{46}$  (v)  $\frac{9}{23}$
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7. Which of the following are true?

- a) If the probability of failing the exam is 0.75, the probability of passing the exam is 0.25
- b) Probability of getting 109 marks out of 100 is 1.09
- c) The probability of an event that is very likely to happen is 1
- d) The probability of an event that cannot happen is unknown
- e) If the probability is too less, it will become negative

- (i) {c,a} (ii) {b,a} (iii) {d,e,a} (iv) {a}
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8. Which of the following experiments have equally likely outcomes?

- a) A ball is hit. It reaches the boundary or not
- b) A man starts his vehicle. It starts or it does not start
- c) A man throws a die. The number on the top is either 1 or not 1
- d) A baby is born, it is a boy or girl

- (i) {b,d} (ii) {b,a} (iii) {a,c,d} (iv) {b,c} (v) {b,a,c}
- 

9. Which of the following are possible values of probability?

- a)  $\frac{1}{2}$
- b) 3

c) -2.4

d) 0.25

e)  $\frac{7}{2}$ 

(i) {b,a} (ii) {c,d} (iii) {a,d} (iv) {c,d,a} (v) {e,b,a}

10. If  $P(E) = 0.56$ , find  $P(\bar{E})$ 

(i) 1.44 (ii) 2.44 (iii) 8.44 (iv) 0.44 (v) 7.44

11. Which of the following are true?

a) The probability of a sure event is 1

b) For an event E, we have  $0 \leq P(E) \leq 1$ c) The probability of an impossible event can be  $> 1$ 

d) The probability of an unsure event is 0

e) The probability of an impossible event is 1

(i) {e,c,a} (ii) {d,b} (iii) {a,b} (iv) {d,b,a} (v) {c,a}

12. Which of the following are true?

a)  $P(E) - P(\bar{E}) = 0$ b)  $P(E) = 1 - P(\bar{E})$ c)  $P(E) + P(\bar{E}) = 0$ d)  $P(E) + P(\text{not } E) = 1$ e)  $P(E) - P(\text{not } E) = 0$ 

(i) {c,d} (ii) {b,d} (iii) {c,d,b} (iv) {a,b} (v) {e,a,b}

13. Two players Saraswathi and Santoshi play a tennis match. It is known that the probability of Saraswathi winning the match is 0.14. What is the probability of Santoshi winning the match?

(i)  $\frac{22}{25}$  (ii)  $\frac{43}{50}$  (iii)  $\frac{44}{51}$  (iv)  $\frac{21}{25}$  (v)  $\frac{7}{50}$ 

14. Geetika and Soundarya are friends. What is the probability that both will have different birthdays? (ignoring a leap year).

(i)  $\frac{365}{366}$  (ii) 1 (iii)  $\frac{1}{365}$  (iv)  $\frac{364}{365}$  (v)  $\frac{363}{365}$ 

15. Keerthi and Pooja are friends. What is the probability that both will have same birthdays? (ignoring a leap year).

(i)  $\frac{1}{183}$  (ii) 0 (iii)  $\frac{2}{365}$  (iv)  $\frac{1}{365}$  (v)  $\frac{364}{365}$ 

In a musical chair game, the person playing the music has been advised to stop playing the music at any time with 16. in 2 minutes after she starts playing. What is the probability that the music will stop within the first half-minute after starting?

1

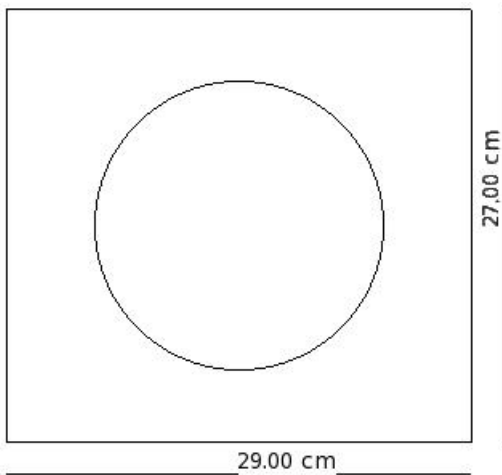
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1

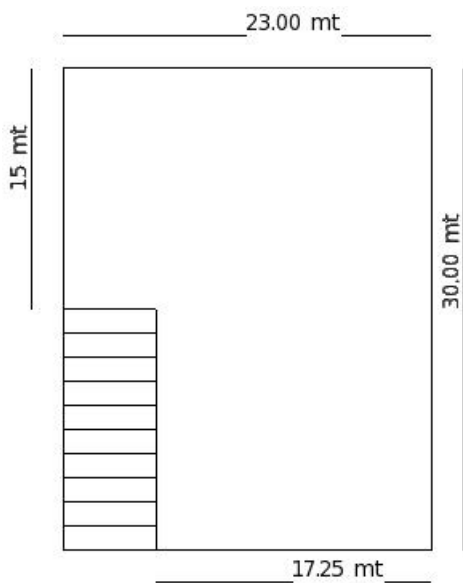
- (i)  $\frac{4}{5}$  (ii)  $\frac{5}{4}$  (iii)  $\frac{4}{0}$  (iv) 0 (v)  $\frac{2}{2}$

17. Suppose a die is thrown on a rectangular region as shown below. What is the probability that it will land inside the circle of diameter 18.00 cm?



- (i)  $\frac{65}{203}$  (ii)  $\frac{67}{203}$  (iii)  $\frac{66}{203}$  (iv)  $\frac{137}{203}$  (v)  $\frac{67}{204}$

18. A missing helicopter is reported to have crashed somewhere in the rectangular region shown in fig. What is the probability that it crashed inside the shaded region as shown in the figure?



- (i) 0 (ii)  $\frac{2}{9}$  (iii)  $\frac{1}{8}$  (iv)  $\frac{1}{4}$  (v)  $\frac{7}{8}$

**Assignment Key**

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- 1) (iii)
- 2) (ii)
- 3) (iii)
- 4) (v)
- 5) (iii)
- 6) (iv)
- 7) (iv)
- 8) (iii)
- 9) (iii)
- 10) (iv)
- 11) (iii)
- 12) (ii)
- 13) (ii)
- 14) (iv)
- 15) (iv)
- 16) (i)
- 17) (iii)
- 18) (iii)