EduSahara™ Assignment

Name : Probability Concepts

Chapter : Probability

Grade : SSC Grade X



1. What is the probability of a sure event?

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

2. What is the probability of an impossible event?

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

3. There are 64 students in a class room of whom 30 are boys and 34 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a boy ?

   (i) $\frac{17}{32}$ (ii) $\frac{1}{2}$ (iii) $\frac{7}{16}$ (iv) $\frac{16}{33}$ (v) $\frac{15}{32}$

4. There are 64 students in a class room of whom 34 are boys and 30 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a girl ?

   (i) $\frac{1}{2}$ (ii) $\frac{7}{16}$ (iii) $\frac{17}{32}$ (iv) $\frac{15}{32}$ (v) $\frac{16}{33}$

5. In a lottery, there are 26 prizes and 19 blanks. What is the probability of getting a prize?

   (i) $\frac{27}{46}$ (ii) $\frac{5}{9}$ (iii) $\frac{26}{45}$ (iv) $\frac{19}{45}$ (v) $\frac{3}{5}$

6. In a lottery, there are 24 prizes and 14 blanks. What is the probability of not getting a prize?

   (i) $\frac{12}{19}$ (ii) $\frac{6}{19}$ (iii) $\frac{2}{5}$ (iv) $\frac{7}{19}$ (v) $\frac{8}{19}$

7. Which of the following are true?

   a) If the probability of failing the exam is 0.83, the probability of passing the exam is 0.17
   b) The probability of an event that cannot happen is unknown
   c) Probability of getting 105 marks out of 100 is 1.05
   d) The probability of an event that is very likely to happen is 1
   e) If the probability is too less, it will become negative

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

8. Which of the following experiments have equally likely outcomes?

   a) A man starts his vehicle. It starts or it does not starts
   b) A man throws a die. The number on the top is either 5 or not 5
   c) A true/false question is attempted. The answer is either right or wrong
   d) A baby is born. It is a boy or girl
   e) A ball is hit. It reaches the boundary or not

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

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

a) 4
b) $\frac{4}{5}$
c) 0.17
d) $\frac{7}{3}$
e) -3.5

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

10. If $P(E) = 0.5$, find $P(\bar{E})$

(i) 7.5 (ii) 8.5 (iii) 0.5 (iv) 2.5 (v) 1.5

11. Which of the following are true?

a) For an event E, we have $0 \leq P(E) \leq 1$
b) The probability of an impossible event is 1
c) The probability of an unsure event is 0
d) The probability of a sure event is 1
e) The probability of an imposible event can be > 1

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

12. Which of the following are true?

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

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

13. Two players Kareena and Trisha play a tennis match. It is known that the probability of Kareena winning the match is 0.80. What is the probability of Trisha winning the match?

(i) $\frac{4}{5}$ (ii) $\frac{1}{5}$ (iii) $\frac{2}{5}$ (iv) 0 (v) $\frac{1}{3}$

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

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

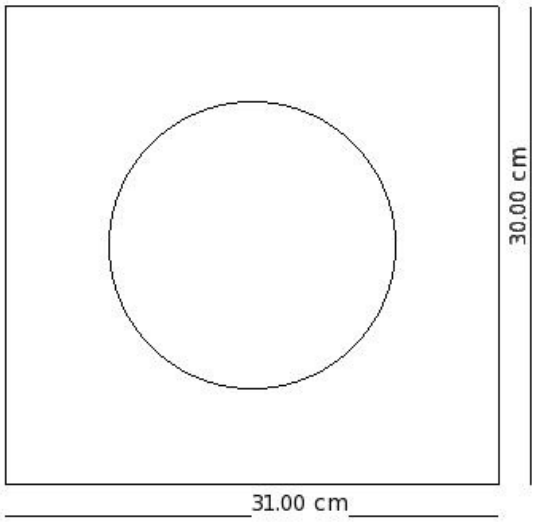
15. Dolly and Kamala are friends. What is the probability that both will have same birthdays? (ignoring a leap year).

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

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

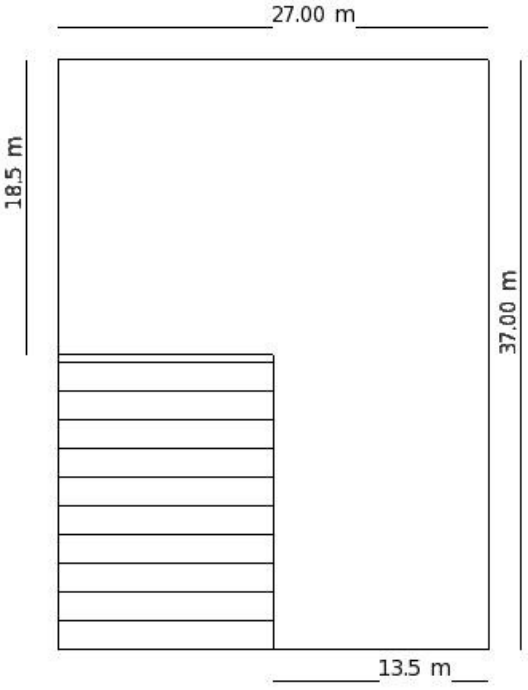
(i) $\frac{1}{4}$ (ii) $\frac{1}{2}$ (iii) 0 (iv) $\frac{2}{5}$ (v) $\frac{3}{4}$

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) $\frac{298}{1085}$ (ii) $\frac{296}{1085}$ (iii) $\frac{788}{1085}$ (iv) $\frac{297}{1085}$ (v) $\frac{149}{543}$

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) $\frac{3}{4}$ (ii) $\frac{2}{5}$ (iii) $\frac{1}{4}$ (iv) 0 (v) $\frac{1}{2}$

## Assignment Key

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