EduSahara™ Assignment

Name : Probability Concepts

Chapter : Probability

Grade : SSC Grade X

1. What is the probability of a sure event?

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

2. What is the probability of an impossible event?

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

3. There are 74 students in a class room of whom 36 are boys and 38 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a boy ?

   (i) $\frac{18}{37}$ (ii) $\frac{19}{37}$ (iii) $\frac{1}{2}$ (iv) $\frac{17}{37}$

4. There are 48 students in a class room of whom 24 are boys and 24 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a girl ?

   (i) $\frac{3}{4}$ (ii) $\frac{5}{6}$ (iii) $\frac{1}{2}$ (iv) $\frac{4}{5}$ (v) $\frac{2}{3}$

5. In a lottery, there are 30 prizes and 11 blanks. What is the probability of getting a prize?

   (i) $\frac{30}{41}$ (ii) $\frac{31}{42}$ (iii) $\frac{11}{41}$ (iv) $\frac{29}{41}$ (v) $\frac{31}{41}$

6. In a lottery, there are 17 prizes and 16 blanks. What is the probability of not getting a prize?

   (i) $\frac{5}{11}$ (ii) $\frac{16}{33}$ (iii) $\frac{1}{2}$ (iv) $\frac{17}{33}$

7. Which of the following are true?

   a) If the probability is too less, it will become negative
   b) The probability of an event that is very likely to happen is 1
   c) Probability of getting 101 marks out of 100 is 1.01
   d) If the probability of failing the exam is 0.29, the probability of passing the exam is 0.71
   e) The probability of an event that cannot happen is unknown

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

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

   a) A baby is born. It is a boy or girl
   b) A true/false question is attempted. The answer is either right or wrong
   c) A man throws a die. The number on the top is either 6 or not 6
   d) A ball is hit. It reaches the boundary or not
   e) A man starts his vehicle. It starts or it does not starts

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

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

a) $\frac{1}{5}$
b) 2
c) 0.75
d) -2
e) $\frac{8}{5}$

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

10. If $P(E) = 0.86$, find $P(\bar{E})$

(i) 7.14 (ii) 8.14 (iii) 0.14 (iv) 1.14 (v) 2.14

11. Which of the following are true?

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

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

12. Which of the following are true?

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

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

13. Two players Savitha and Ankitha play a tennis match. It is known that the probability of Savitha winning the match is 0.40. What is the probability of Ankitha winning the match?

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

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

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

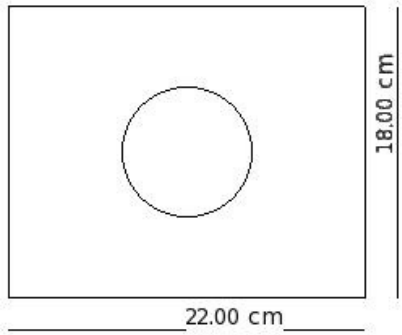
15. Rita and Parvathi are friends. What is the probability that both will have same birthdays? (ignoring a leap year).

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

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?

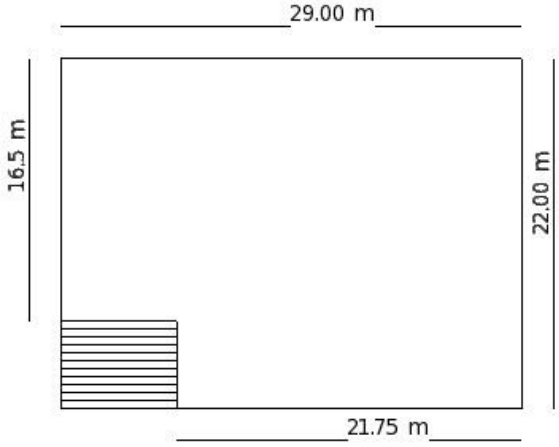
(i) $\frac{3}{4}$ (ii) $\frac{1}{4}$ (iii) $\frac{2}{5}$ (iv) 0 (v) $\frac{1}{2}$

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 8.00 cm?



(i) $\frac{1}{9}$ (ii) $\frac{55}{63}$ (iii) $\frac{1}{7}$ (iv) $\frac{9}{64}$ (v) $\frac{8}{63}$

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) $\frac{15}{16}$ (ii) $\frac{2}{17}$ (iii) $\frac{1}{16}$ (iv) 0 (v) $\frac{1}{8}$

Assignment Key

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