



A carton consist of 63 shirts of which 50 are good, 9 have minor defects and 4 have major defects. Prasad, a trader, will only accept the shirts which are good, but Aruna, another trader, will only reject the shirts which have major defects. One shirt is drawn at random from the carton. What is the probability that it is acceptable to Aruna?

- (i) $\frac{4}{63}$ (ii) $\frac{58}{63}$ (iii) $\frac{20}{21}$ (iv) $\frac{59}{63}$ (v) $\frac{15}{16}$

2. Three unbiased coins are tossed simultaneously. Find the probability of getting at least two heads.

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

3. Two unbiased coins are tossed simultaneously. Find the probability of getting at least two heads.

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

A die is thrown 295 times with the frequencies for outcomes 1, 2, 3, 4, 5 and 6 as given in the following table

Outcome	1	2	3	4	5	6
Frequency	30	40	45	55	60	65

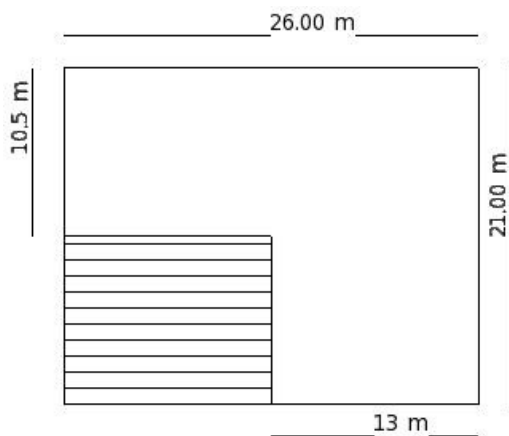
If the die is thrown again randomly, find the probability of getting 3 as outcome.

- (i) $\frac{9}{59}$ (ii) $\frac{50}{59}$ (iii) $\frac{10}{59}$ (iv) $\frac{8}{59}$ (v) $\frac{1}{6}$

5. Three unbiased coins are tossed simultaneously. Find the probability of getting at least one head.

- (i) $\frac{7}{8}$ (ii) $\frac{3}{4}$ (iii) $\frac{1}{8}$ (iv) 1 (v) $\frac{8}{9}$

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

7. An unbiased die is thrown once. Find the probability of getting a number less than 3?

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

8. Kajal and Ravali are friends. What is the probability that both will have different birthdays? (ignoring a leap year).

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

A game consists of tossing a coin 3 times and noting its outcome each time. Ravi wins if all the tosses give the same result i.e., three heads or three tails, and loses otherwise. Calculate the probability that Ravi will lose the game.

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

10. 88 cards are numbered 1,2,3,...88 and put in a box and mixed thoroughly. A card is drawn at random. What is the probability that the number on the drawn card is a prime number?

- (i) $\frac{3}{11}$ (ii) $\frac{65}{88}$ (iii) $\frac{23}{88}$ (iv) $\frac{24}{89}$ (v) $\frac{1}{4}$

11. An unbiased die is thrown once. Find the probability of getting a prime number?

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

12. A box contains 40 discs which are numbered from 1 to 40. If one disc is drawn at random from the box, find the probability that it bears a two-digit number.

- (i) $\frac{4}{5}$ (ii) $\frac{31}{40}$ (iii) $\frac{9}{40}$ (iv) $\frac{32}{41}$ (v) $\frac{3}{4}$

13. An unbiased die is thrown once. Find the probability of getting a number greater than 4?

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

14. Which of the following are true?

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

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

The distances (in km) of engineers from their residence to their place of work were found as follows

15. 29 4 4 1 1 11 20 30 1

What is the empirical probability that an engineer lives greater than 11 km from her place of work?

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

16. A box contains 12 blue marbles, 28 black marbles, 24 white marbles and 10 red marbles. One marble is drawn at random from the box. Find the probability that the marble drawn is red.

- (i) $\frac{32}{37}$ (ii) $\frac{6}{37}$ (iii) $\frac{5}{37}$ (iv) $\frac{4}{37}$ (v) $\frac{3}{19}$

17. Three unbiased coins are tossed simultaneously. Find the probability of getting exactly one head.

- (i) $\frac{1}{2}$ (ii) $\frac{5}{8}$ (iii) $\frac{1}{4}$ (iv) $\frac{3}{8}$ (v) $\frac{4}{9}$

18. A die is thrown 150 times. Prime numbers appeared on the upper face 35 times. If a die is thrown at random, what is the probability of getting a prime number?

- (i) $\frac{7}{30}$ (ii) $\frac{1}{5}$ (iii) $\frac{8}{31}$ (iv) $\frac{23}{30}$ (v) $\frac{4}{15}$

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

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

20. In a lottery, there are 28 prizes and 19 blanks. What is the probability of getting a prize?

- (i) $\frac{27}{47}$ (ii) $\frac{19}{47}$ (iii) $\frac{29}{47}$ (iv) $\frac{28}{47}$ (v) $\frac{29}{48}$

21. A survey of 40 men showed that only 20 of them know Spanish. Out of these men, if one is selected at random, what is the probability that the selected man knows Spanish?

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

A carton consist of 100 shirts of which 88 are good, 8 have minor defects and 4 have major defects. Praveen, a trader, will only accept the shirts which are good, but Santoshi, another trader, will only reject the shirts which have major defects. One shirt is drawn at random from the carton. What is the probability that it is acceptable to Praveen?

- (i) $\frac{23}{25}$ (ii) $\frac{21}{25}$ (iii) $\frac{3}{25}$ (iv) $\frac{23}{26}$ (v) $\frac{22}{25}$

23. Two unbiased dice are thrown simultaneously. Find the probability of getting a doublet.

- (i) $\frac{1}{6}$ (ii) $\frac{5}{6}$ (iii) 0 (iv) $\frac{1}{3}$ (v) $\frac{2}{7}$

24. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is a face card ?

- (i) $\frac{1}{26}$ (ii) $\frac{1}{52}$ (iii) $\frac{1}{4}$ (iv) $\frac{1}{13}$ (v) $\frac{3}{13}$

25. When two coins are tossed simultaneously, how many elementary events are possible?

- (i) 4 (ii) 1 (iii) 7 (iv) 5 (v) 3

Assignment Key

1) (iv)	2) (iv)	3) (i)	4) (i)	5) (i)	6) (i)
7) (i)	8) (iv)	9) (ii)	10) (iii)	11) (ii)	12) (ii)
13) (iii)	14) (v)	15) (ii)	16) (iii)	17) (iv)	18) (i)
19) (ii)	20) (iv)	21) (ii)	22) (v)	23) (i)	24) (v)
25) (i)					