General Probability - 1

Exercises

(answers on reverse side)

1. A die is rolled twice. What is the probability of observing

(a) at least one five

(b) a four and a three

(c) a pair (two numbers are the same)

(d) a sum of eight

2. A family has three children. What is the probability that

(a) there are 3 boys

(b) there are 2 boys and one girl

(c) there are at least two girls

3. A die is thrown three times. Find the probability of observing

(a) three sixes

(b) three even numbers

(c) at least two odd numbers

(d) exactly two odd numbers

4. In a class of 25 students it is found that five of the students play both tennis and chess, ten play only tennis and three do not participate in either tennis or chess. A student is selected at random from the class. Find the probability that the student:

(a) plays both tennis and chess

(b) plays chess only

(c) does not play chess

5. A bag contains five white ball and four blue balls. Two balls are selected in such a way that the first ball drawn is **not** replaced. Find the probability of selecting only one white ball.

6. Tony has a 90% chance of passing his math test, while Tanya has an 85% chance of passing the same test. If they both take the math test, find the probability that

(a) only one of them passes the test

(b) at least one of them passes the test

7. A coin is weighted (unfair) so that it lands 'heads' 70% of the time.

(a) If the coin is flipped four times, what is the probability of getting 'heads' each time?

(b) What is the probability of getting at least one tail?

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Answers

1. (a) $\frac{11}{36}$ (b) $\frac{1}{18}$ (c) $\frac{1}{6}$ (d) $\frac{5}{36}$

2. (a) $\frac{1}{8}$ (b) $\frac{3}{8}$ (c) $\frac{1}{2}$

3. (a) $\frac{1}{216}$ (b) $\frac{1}{8}$ (c) $\frac{1}{2}$ (d) $\frac{3}{8}$

4. (a) $\frac{1}{5}$ (b) $\frac{7}{25}$ (c) $\frac{13}{25}$

5. $\frac{5}{9}$

6. (a) $\frac{11}{50}$ [or 0.22] (b) 0.985

7. (a) 0.2401 (b) 0.7599