

Day 18

DIY

Q1. Problem statement (Probability of an event)

Consider that you have a coin and dice. Each time you roll them, you get a result, so try to solve the given questions based on coins and dice.

1. Roll the dice twice and find the probability of getting the number 6 each time.
2. Roll two dice at a time and find the probability of getting a sum of both dice greater than 9.
3. Flip a coin three times continuously and find the probability of getting three heads in a row.
4. Flip a coin and dice simultaneously and find the probability of getting head on the coin and number 5 on the dice simultaneously.
5. Card is drawn at random from the pack of 52 cards:
 - I. Find the probability that it is an honor card.
 - II. It is a face card of a diamond house.

Input Format:

You do not need to read any input on this problem.

Sample Output:

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Probability of getting number 6 on each dice is 0.028
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Probability of getting a sum of both dice more than 9 is: 0.167
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Probability of getting three heads in a row is: 0.125

Probability of getting Head on the coin and number 5 on the dice at the same time is: 0.083

Probability of getting an honor card is: 0.308

Probability of getting an honor card is: 0.058

Q2. Problem statement (Union and intersection of events)

In a class of 100 students, a survey was conducted for their favorite subject, where they could choose only one subject as their favorite. 23 boys and 15 girls like Maths, 17 boys and 23 girls like Science, and 10 boys and 12 girls like English. If we choose a random student out of them, find out the probability, where,

1. Students love Science subject.
2. Girls love Maths subject or English subject.
3. If she is a girl, she loves English, or if he is a boy, then he loves Maths.

Subjects Gender	Maths	science	English	Total
Boys	23	17	10	50
Girls	15	23	12	50
Total	38	40	22	100

Input Format:

You do not need to read any input on this problem.

Sample Output:

Probability of student loving science is 0.4

Probability of girl loves maths or science subject is 0.27

Probability of girl loves english or boys love maths subject is 0.35

