

S3 MATHEMATICS TEST (PROBABILITY)

TIME: 2 HOURS

1. What is the probability of the occurrence of a number that is odd or less than 5 when a fair die is rolled?
2. When two dice are rolled, find the probability of getting a greater number on the first die than the one on the second, given that the sum should equal 8.
3. Two dice are rolled, find the probability that the sum is
 - a) equal to 1
 - b) equal to 4
 - c) less than 13
4. A die is rolled and a coin is tossed, find the probability that the die shows an odd number and the coin shows a head.
5. You toss a fair coin three times:
 - a. What is the probability of three heads, HHHHHH?
 - b. What is the probability that you observe exactly one heads?
 - c. Given that you have observed *at least* one heads, what is the probability that you observe at least two heads?
6. A and B are independent events such that $P(A \cup B) = 0.8$, $P(A \cap B) = 0.1$. Find the possible value of $P(A)$ and $P(B)$
7. In class X, 20% of the students are boys and 80% of them are girls. The probability that boys passed in mathematics is 0.5 and the probability that girls passed in mathematics is 0.10. One student is selected at random. What is the probability that the selected student is passed in mathematics?

END