

I-NMC Sample Questions Category Z

1. A fair six-sided die is rolled. What is the probability of rolling a number greater than 4?
 - A. $1/3$
 - B. $1/6$
 - C. $1/2$
 - D. $2/3$
 - E. $1/5$
2. A pizza shop offers 8 toppings. How many 3-topping pizzas are possible?
 - A. 56
 - B. 24
 - C. 336
 - D. 512
 - E. 112
3. A bag contains 3 red marbles and 5 blue marbles. If one marble is drawn at random, what is the probability it is red?
 - A. $3/8$
 - B. $3/5$
 - C. $5/8$
 - D. $2/5$
 - E. $2/8$
4. What is the mean of the numbers 5, 7, 9, 11, 4, 8, and 4?
 - A. 8
 - B. 7
 - C. 9
 - D. 10
 - E. 5
5. What is the variance of the numbers 20, 23, 10, 5, 5, 13, and 16?
 - A. 42.12
 - B. 43.87
 - C. 51.23
 - D. 44.59
 - E. 43.64
6. In a binomial distribution with $n=5$ trials and success probability $p = 0.4$, what is $P(X = 2)$?
 - A. 0.346
 - B. 0.230
 - C. 0.313
 - D. 0.432
 - E. 0.327

7. A random variable X follows a uniform distribution over $[0,5]$. What is $P(1 < X < 3)$?
- A. 0.4
 - B. 0.2
 - C. 0.6
 - D. 0.8
 - E. 0.5
8. If $X \sim N(50, 10^2)$, what is the z -score for $X = 70$?
- A. 2
 - B. 0.5
 - C. 1
 - D. 1.5
 - E. 2.5
9. A license plate has 3 letters followed by 2 digits (e.g., ABC 12). If repetitions are allowed, how many possible plates are there?
- A. 1757600
 - B. 676000
 - C. 1404000
 - D. 60466176
 - E. 1382400
10. A team of 4 must include at least 1 woman. If there are 6 men and 4 women, how many teams are possible?
- A. 195
 - B. 100
 - C. 80
 - D. 210
 - E. 15