Probability Distributions — Practice Test

Ontario Mathematics of Data Management, Grade 12, University Preparation (MDM4U) • 25 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A normal distribution has mean 100 and standard deviation 10 The z score for a value of 110 is**

- A 2
- B 0
- C 12
- D 1

Understand It with Pulse | Flag a mistake

2 **A fair coin is tossed 4 times. The probability of no heads is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A random variable takes values with equal probability. For values 1,2,3 the expected value is**

- A 3
- B 1
- C 4
- D 2

Understand It with Pulse | Flag a mistake

4 **A variable takes the values 10,20,30,40 with equal probability. Its expected value is**

- A 30
- B 20
- C 25
- D 35

Understand It with Pulse | Flag a mistake

5 **A die is rolled 6 times. The expected number of sixes is**

- A 1.5
- B 0.5
- C 1
- D 12

Understand It with Pulse | Flag a mistake

6 **For a binomial distribution with n = 10 and probability 0.5, the expected number of successes is**

- A 7
- B 3
- C 5
- D 10

Understand It with Pulse | Flag a mistake

7 **A normal distribution has mean 50 and standard deviation 5 The z score for a value of 60 is**

A 3

B 1

C 0

D 2

Understand It with Pulse | Flag a mistake

8 **A fair coin is tossed 5 times. The probability of no heads is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A random variable takes values with equal probability. For values 0,10,20 the expected value is**

- A 10
- B 11
- C 9
- D 12

Understand It with Pulse | Flag a mistake

10 **A variable takes the values 1,5,9 with equal probability. Its expected value is**

- A 10
- B 0
- C 15
- D 5

Understand It with Pulse | Flag a mistake

11 **A die is rolled 12 times. The expected number of sixes is**

- A 2.5
- B 1.5
- C 13
- D 2

Understand It with Pulse | Flag a mistake

12 **For a binomial distribution with n = 20 and probability 0.5, the expected number of successes is**

- A 12
- B 8
- C 20
- D 10

Understand It with Pulse | Flag a mistake

13 **A normal distribution has mean 80 and standard deviation 10 The z score for a value of 90 is**

A 2

B 1

C 0

D 12

Understand It with Pulse | Flag a mistake

14 **A fair coin is tossed 6 times. The probability of no heads is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A random variable takes values with equal probability. For values 5,15 the expected value is**

- A 10
- B 11
- C 9
- D 12

Understand It with Pulse | Flag a mistake

16 **A variable takes the values 0,5,10,15,20 with equal probability. Its expected value is**

- A 15
- B 5
- C 10
- D 20

Understand It with Pulse | Flag a mistake

17 A die is rolled 18 times. The expected number of sixes is

- A 3.5
- B 3
- C 2.5
- D 14

Understand It with Pulse | Flag a mistake

18 For a binomial distribution with n = 30 and probability 0.5, the expected number of successes is

- A 15
- B 17
- C 13
- D 30

Understand It with Pulse | Flag a mistake

19 **A normal distribution has mean 70 and standard deviation 5 The z score for a value of 75 is**

A 2

B 0

C 12

D 1

Understand It with Pulse | Flag a mistake

20 **A fair coin is tossed 3 times. The probability of no heads is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A random variable takes values with equal probability. For values 2,4,6,8 the expected value is**

- A 6
- B 5
- C 4
- D 7

Understand It with Pulse | Flag a mistake

22 **A variable takes the values 100,200 with equal probability. Its expected value is**

- A 155
- B 145
- C 160
- D 150

Understand It with Pulse | Flag a mistake

23 **A normal distribution has mean 100 and standard deviation 15 The z score for a value of 85 is**

- A 0
- B -2
- C 10
- D -1

Understand It with Pulse | Flag a mistake

24 **A normal distribution has mean 50 and standard deviation 10 The z score for a value of 30 is**

- A -2
- B -1
- C -3
- D 0

Understand It with Pulse | Flag a mistake

25 **A normal distribution has mean 80 and standard deviation 20 The z score for a value of 60 is**

A 0

B -2

C 10

D -1

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	D	**10.**	D	**19.**	D
2.	0.0625	**11.**	D	**20.**	0.125
3.	D	**12.**	D	**21.**	B
4.	C	**13.**	B	**22.**	D
5.	C	**14.**	0.015625	**23.**	D
6.	C	**15.**	A	**24.**	A
7.	D	**16.**	C	**25.**	D
8.	0.03125	**17.**	B		
9.	A	**18.**	A		

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