ONTARIO MATHEMATICS OF DATA MANAGEMENT, GRADE 12, UNIVERSITY PREPARATION (MDM4U) · FINAL EXAM · 50 QUESTIONS

Final Exam — Practice Test

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 **The number of combinations of 3 objects chosen from 6 different objects is**

- A 25
- B 20
- C 18
- D 120

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 **The mean of the data set 10,20,30 is**

A 22

B 18

C 20

D 25

Understand It with Pulse | Flag a mistake

4 **A line of best fit passes through (0, 0) and (2, 4) Its slope is**

A 2

B 3

C 1

D 4

Understand It with Pulse | Flag a mistake

5 The number of permutations of 2 objects chosen from 5 different objects is

- A 20
- B 10
- C 22
- D 31

Understand It with Pulse | Flag a mistake

6 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

7 The median of the data set 2,4,6,8,10,12 is

- A 9
- B 7
- C 5
- D 12

Understand It with Pulse | Flag a mistake

8 The standard deviation of the data set 10,10,10 is

- A 2
- B 5
- C 0
- D 11

Understand It with Pulse | Flag a mistake

9 **The number of permutations of 2 objects chosen from 6 different objects is**

A 15

B 30

C 32

D 41

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **The mode of the data set 2,2,3,4 is**

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

Understand It with Pulse | Flag a mistake

12 **Correlation does not imply causation. This statement is**

- A true
- B false
- C unknown
- D sometimes

Understand It with Pulse | Flag a mistake

13 **The number of ways to choose a president and a secretary from 4 people is**

- A 12
- B 16
- C 6
- D 14

Understand It with Pulse | Flag a mistake

14 **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

15 **The data set is 3, 3, 7, 9. The mode is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A correlation coefficient of 0.8 indicates which type of relationship?**

A weak positive

B strong positive

C strong negative

D no relationship

Understand It with Pulse | Flag a mistake

17 The number of combinations of 4 objects chosen from 9 distinct objects is

- A 126
- B 131
- C 123
- D 3024

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

19 The data set is 6, 11, 18, 25. The range is

ANSWER _____

Understand It with Pulse | Flag a mistake

20 The mean of 10,20,30,40 is

- A 27
- B 23
- C 29
- D 25

Understand It with Pulse | Flag a mistake

21 The number of ways to arrange 6 different books in a row is

- A 120
- B 726
- C 36
- D 720

Understand It with Pulse | Flag a mistake

22 **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

23 **A survey of 30 students is a sample or a census? It is a**

- **A** census
- **B** population
- **C** sample
- **D** parameter

Understand It with Pulse | Flag a mistake

24 **A correlation coefficient of 0.5 indicates a strong or weak, positive or negative relationship? It is The coefficient is positive.**

- A weak positive
- B strong negative
- C moderate positive
- D no relationship

Understand It with Pulse | Flag a mistake

25 **The number of combinations of 2 objects chosen from 7 different objects is**

- A 26
- B 21
- C 19
- D 42

Understand It with Pulse | Flag a mistake

26 **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

27 **A sample that only includes volunteers may be biased. This statement is**

- A false
- B unknown
- C sometimes
- D true

Understand It with Pulse | Flag a mistake

28 **If the standard deviation is 11 the variance is**

A 124

B 11

C 121

D 22

Understand It with Pulse | Flag a mistake

29 **The number of permutations of 2 objects chosen from 10 distinct objects is**

A 45

B 92

C 101

D 90

Understand It with Pulse | Flag a mistake

30 **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

31 **For the ordered data set 0,20,40,60,80 the lower quartile is**

A 30

B 15

C 20

D 40

Understand It with Pulse | Flag a mistake

32 **A line of best fit passes through (1, 2) and (3, 8) Its slope is**

- A 3
- B 4
- C 2
- D 6

Understand It with Pulse | Flag a mistake

33 **A coin is tossed 5 times. The total number of outcomes is**

- A 10
- B 32
- C 34
- D 25

Understand It with Pulse | Flag a mistake

34 **For a binomial distribution with n = 40 and probability 0.5, the expected number of successes is**

- A 22
- B 20
- C 18
- D 40

Understand It with Pulse | Flag a mistake

35 **The mean of the data set 6,12,18 is**

- A 15
- B 9
- C 12
- D 18

Understand It with Pulse | Flag a mistake

36 **A line of best fit passes through (0, 2) and (4, 10) Its slope is**

A 3

B 2

C 1

D 4

Understand It with Pulse | Flag a mistake

37 **The number of permutations of 2 objects chosen from 8 different objects is**

A 28

B 58

C 67

D 56

Understand It with Pulse | Flag a mistake

38 **For a binomial distribution with n = 20 and probability 0.25 the expected number of successes is**

A 7

B 3

C 5

D 20

Understand It with Pulse | Flag a mistake

39 **The mean of the data set 7,14,21 is**

A 17

B 14

C 11

D 20

Understand It with Pulse | Flag a mistake

40 **The mean of 30,50,70 is**

A 50

B 53

C 47

D 59

Understand It with Pulse | Flag a mistake

41 **The number of permutations of 3 objects chosen from 10 distinct objects is**

A 720

B 240

C 723

D 120

Understand It with Pulse | Flag a mistake

42 **A die is rolled 24 times. The expected number of sixes is**

- A 4.5
- B 3.5
- C 4
- D 15

Understand It with Pulse | Flag a mistake

43 **The median of the data set 100,200,300 is**

- A 204
- B 196
- C 208
- D 200

Understand It with Pulse | Flag a mistake

44 **A line of best fit passes through (2, 4) and (4, 12) Its slope is**

A 5

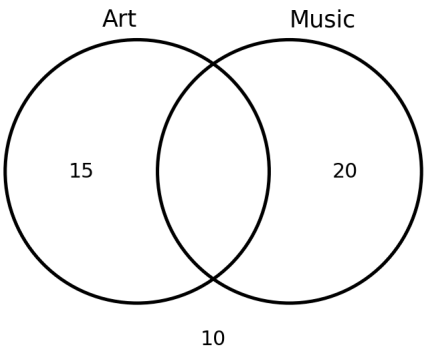
B 3

C 8

D 4

Understand It with Pulse | Flag a mistake

45 **The Venn diagram shows students in two clubs. There are 57 students in total. The number in both clubs is Figure 1**



A 12

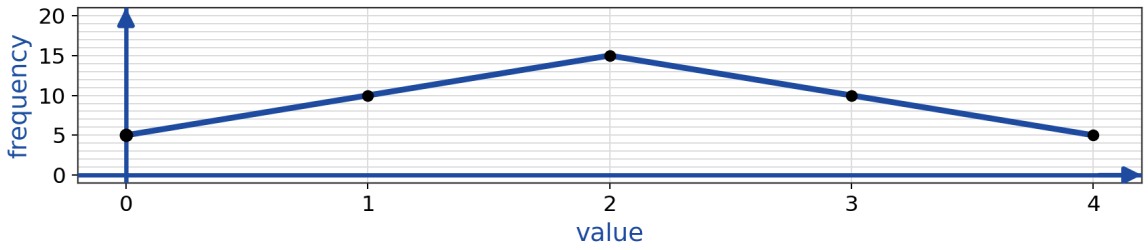
B 8

C 20

D 5

Understand It with Pulse | Flag a mistake

46 **The graph shows frequencies for values 0 to 4. The frequency for value 2 is Figure 1**



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

Understand It with Pulse | Flag a mistake

47 **The range of the data set 1,11,21,41 is**

- **A** 44
- **B** 36
- **C** 50
- **D** 40

Understand It with Pulse | Flag a mistake

48 **A line of best fit passes through (0, 5) and (5, 20) Its slope is**

A 4

B 2

C 3

D 6

Understand It with Pulse | Flag a mistake

49 **The number of ways to choose a president and a secretary from 5 people is**

A 25

B 20

C 10

D 22

Understand It with Pulse | Flag a mistake

50 **A normal distribution has mean 40 and standard deviation 8 The z score for a value of 56 is**

A 3

B 1

C 2

D 0

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. 0.0625
3. C
4. A
5. A
6. C
7. B
8. C
9. B
10. 0.03125
11. D
12. A
13. A
14. D
15. 3
16. B
17. A
18. 0.015625
19. 19
20. D
21. D
22. B
23. C
24. C
25. B
26. B
27. D
28. C
29. D
30. A
31. C
32. A
33. B
34. B
35. C
36. B
37. D
38. C
39. B
40. A
41. A
42. C
43. D
44. D
45. A
46. A
47. D
48. C
49. B
50. C

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