Final Exam — Practice Test

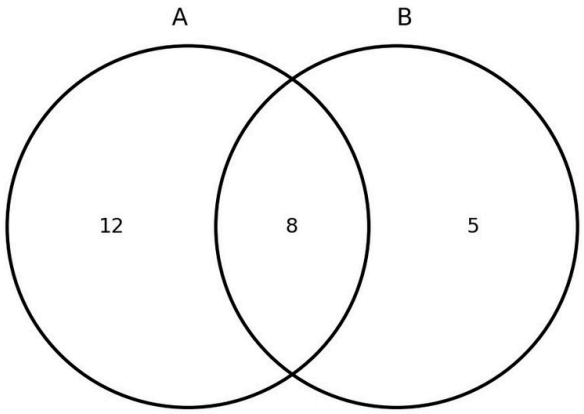
This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The mean of the data 12, 18, 24, 30, 36 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **In a Venn diagram, 12 elements are in set A only, 8 are in both sets, and 5 are in set B only. The number of elements in set A is**



Question 2

In a Venn diagram, 12 elements are in set A only, 8 are in both sets, and 5 are in set B only. The number of elements in set A is

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **The number of permutations of 7 objects taken 3 at a time is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The term containing x^5 in the expansion of $(x + 1)^7$ has coefficient**

A 22

B 20

C 21

D 42

Understand It with Pulse | Flag a mistake

5 **A sinusoidal function has amplitude 4 and period 360 degrees. Its maximum value, if its midline is 0, is**

- **A** 5
- **B** 3
- **C** 4
- **D** 8

Understand It with Pulse | Flag a mistake

6 **Five numbers have a mean of 20. Their total is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The contrapositive of the statement if a number is divisible by 4 then a number is even is**

- **A** if not a number is even then not a number is divisible by 4
- **B** if not a number is divisible by 4 then not a number is even
- **C** if a number is even then a number is divisible by 4
- **D** if a number is divisible by 4 then not a number is even

Understand It with Pulse | Flag a mistake

8 **Four books are chosen from 8 and placed in order on a shelf. The number of possible orders is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **The coefficient of the term with x^2 in the expansion of $(x + 1)^6$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **For f(x) = 1x² + 0x + 3 , the value of f(2) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **The median of the data 12, 18, 24, 30, 36 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 The contrapositive of the statement if a figure is a rhombus then a figure is a parallelogram is

Question 12

The contrapositive of the statement if a figure is a rhombus then a figure is a parallelogram is

A) if not a figure is a rhombus then not a figure is a parallelogram

B) if not a figure is a parallelogram then not a figure is a rhombus

C) if a figure is a parallelogram then a figure is a rhombus

D) if a figure is a rhombus then not a figure is a parallelogram

- **A** if not a figure is a rhombus then not a figure is a parallelogram
- **B** if not a figure is a parallelogram then not a figure is a rhombus
- **C** if a figure is a parallelogram then a figure is a rhombus
- **D** if a figure is a rhombus then not a figure is a parallelogram

Understand It with Pulse | Flag a mistake

13 The number of combinations of 7 objects taken 3 at a time is

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **The number of terms in the expansion of $(a + b)^6$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **The function f(x) = 3x - 2 has value 7 when x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A data set has an even number of values. Its median is found by**

A taking the middle value

B averaging the two middle values

C taking the largest value

D adding all values

Understand It with Pulse | Flag a mistake

17 **The converse of the statement if it rains then the ground is wet is**

- **A** if not it rains then not the ground is wet
- **B** if not the ground is wet then not it rains
- **C** if it rains and the ground is wet
- **D** if the ground is wet then it rains

Understand It with Pulse | Flag a mistake

18 **A lottery ticket chooses 5 numbers from 1 to 40. The number of different tickets is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **In the expansion of $(x + y)^4$, the coefficient of x^3y^1 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 For the exponential function $f(x) = 5 \times 1^x$, the value of f(2) is

ANSWER

Understand It with Pulse | Flag a mistake

21 The population standard deviation of 5, 15, 25, 35, 45 to two decimal places is

ANSWER

Understand It with Pulse | Flag a mistake

22 In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in the union of A and B is

Question 22

In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in the union of A and B is

ANSWER

Understand It with Pulse | Flag a mistake

23 The number of ways to arrange 5 different books in a row is

ANSWER

Understand It with Pulse | Flag a mistake

24 **The sum of the coefficients in $(x + y)^2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The value of log base 2 of 8 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **Two data sets have the same mean. The set with the larger standard deviation is the one whose values are**

A more spread out

B closer together

C all equal

D fewer in number

Understand It with Pulse | Flag a mistake

27 **In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in set A is**

Question 27

In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in set A is

ANSWER

Understand It with Pulse | Flag a mistake

28 **An outfit is chosen from 3 shirts and 4 pairs of pants. The number of different outfits is**

ANSWER

Understand It with Pulse | Flag a mistake

29 **The sum of the coefficients in the expansion of $(x + y)^5$ is**

ANSWER

Understand It with Pulse | Flag a mistake

30 **The logarithm base 2 of 8 equals**

ANSWER

Understand It with Pulse | Flag a mistake

31 For a value 62 with mean 50 and standard deviation 6, the z score is

ANSWER

Understand It with Pulse | Flag a mistake

32 In a Venn diagram, 18 elements are in set A only, 12 are in both sets, and 4 are in set B only. The number of elements in set A is

Question 32

In a Venn diagram, 18 elements are in set A only, 12 are in both sets, and 4 are in set B only. The number of elements in set A is

ANSWER

Understand It with Pulse | Flag a mistake

33 An outfit is chosen from 3 shirts and 3 pairs of pants. The number of different outfits is

ANSWER

Understand It with Pulse | Flag a mistake

34 The coefficient of x^2 in the expansion of $(2x + 1)^4$ is

ANSWER

Understand It with Pulse | Flag a mistake

35 **For f(x) = 3x + 1 , the value of f(4) is**

ANSWER

Understand It with Pulse | Flag a mistake

36 **For a value 76 with mean 70 and standard deviation 3, the z score is**

ANSWER

Understand It with Pulse | Flag a mistake

37 **In a Venn diagram, 25 elements are in set A only, 15 are in both sets, and 10 are in set B only. The number of elements in the union of A and B is**

Question 37

In a Venn diagram, 25 elements are in set A only, 15 are in both sets, and 10 are in set B only. The number of elements in the union of A and B is

ANSWER

Understand It with Pulse | Flag a mistake

38 **The probability of rolling a 3 on a fair six sided die, as a decimal to three decimal places, is**

ANSWER

Understand It with Pulse | Flag a mistake

39 **The coefficient of x^2 in the expansion of $(3x + 1)^5$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **For the polynomial function of degree 3 with leading coefficient 2, the degree is**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **In a normal distribution with mean 80 and standard deviation 8, the value two standard deviations above the mean is**

ANSWER _____

Understand It with Pulse | Flag a mistake

42 **The converse of the statement if n is prime then n is odd is**

A if not n is prime then not n is odd

B if not n is odd then not n is prime

C if n is odd then n is prime

D if n is prime and n is odd

Understand It with Pulse | Flag a mistake

43 **Events A and B are independent with P(A) equals 0.5 and P(B) equals 0.4. P(A and B) to two decimal places is**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **The coefficient of the term with x^2 in the expansion of $(x + 1)^5$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **For the polynomial function of degree 3 with leading coefficient 3, the degree is**

ANSWER

Understand It with Pulse | Flag a mistake

46 **In a normal distribution with mean 100 and standard deviation 15, about what percent of values lie within one standard deviation of the mean**

ANSWER

Understand It with Pulse | Flag a mistake

47 **In a Venn diagram, 12 elements are in set A only, 8 are in both sets, and 5 are in set B only. The number of elements in the union of A and B is**

Question 47

In a Venn diagram, 12 elements are in set A only, 8 are in both sets, and 5 are in set B only. The number of elements in the union of A and B is

ANSWER

Understand It with Pulse | Flag a mistake

48 **Events A and B are independent with P(A) equals 0.4 and P(B) equals 0.75. P(A and B) to two decimal places is**

ANSWER

Understand It with Pulse | Flag a mistake

49 **The term containing x^4 in the expansion of $(x + 1)^9$ has coefficient**

A 126

B 127

C 125

D 252

Understand It with Pulse | Flag a mistake

50 **The function $f(x) = x^4$ has this many real roots counting multiplicity at most**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	24	**18.**	658008	**35.**	13
2.	20	**19.**	4	**36.**	2
3.	210	**20.**	5	**37.**	50
4.	C	**21.**	14.14	**38.**	0.5
5.	C	**22.**	31	**39.**	90
6.	100	**23.**	120	**40.**	3
7.	A	**24.**	4	**41.**	96
8.	1680	**25.**	3	**42.**	C
9.	15	**26.**	A	**43.**	0.20
10.	7	**27.**	22	**44.**	10
11.	24	**28.**	12	**45.**	3
12.	B	**29.**	32	**46.**	68
13.	35	**30.**	3	**47.**	25
14.	7	**31.**	2	**48.**	0.30
15.	3	**32.**	30	**49.**	A
16.	B	**33.**	9	**50.**	4
17.	D	**34.**	24		

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