FINAL EXAM - PRACTICE TEST | NEW BRUNSWICK PRE-CALCULUS B 120 · 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 **A geometric sequence starts with 2 and has common ratio 2. The sum of the first 5 terms is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **For the polynomial $f(x) = x^2 + 4x + 1$, the value of $f(3)$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **For $f(x) = 4x + 2$ and $g(x) = x^2$, the value of $(f + g)(2)$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The number of permutations of 9 objects taken 2 at a time is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The function $f(x) = \frac{1}{x}$ is continuous at x = 5**

- A no
- B only at 0
- C yes
- D never

Understand It with Pulse | Flag a mistake

6 **A geometric sequence starts with 3 and has common ratio 3. Its 6th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The polynomial (x minus 2) times (x plus 1) has a root at x equals**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **For f(x) = 2x + 3 and g(x) = x² , the value of (f composed with g)(2) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **The limit as x approaches 3 of (x² - 9) / (x - 3) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A geometric sequence starts with 5 and has common ratio 2. Its 6th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 The polynomial $x^2 - 9$ has roots at x =

- **A** 3 and -3
- **B** 3 only
- **C** -3 only
- **D** 9 and -9

Understand It with Pulse | Flag a mistake

13 The composition of f(x) = 2x after g(x) = x + 3 at x = 1 is

ANSWER _____

Understand It with Pulse | Flag a mistake

14 A hand of 3 cards is dealt from a standard deck. The number of different hands is

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **The value approached by x^2 as x approaches -2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A geometric sequence starts with 1 and has common ratio 3. Its 6th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **The rational function 1 over (x minus 4) has a vertical asymptote at x equals**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **For f(x) = 4x + 2 and g(x) = x^2 , the value of (g composed with f)(1) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **The number of ways to choose a president and a vice president from 7 people is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **f(x) values near x = 1 are: 1.9 at 0.9, 2.1 at 1.1, and 1.99 at 0.99. The limit as x approaches 1 is most likely**

Question 20

f(x) values near $x = 1$ are : 1.9 at 0.9, 2.1 at 1.1, and 1.99 at 0.99. The limit as x approaches 1 is most likely

ANSWER

Understand It with Pulse | Flag a mistake

21 **A geometric sequence starts with 4 and has common ratio 2. Its 6th term is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **The reciprocal function $\frac{1}{x}$ evaluated at x = 2 is**

ANSWER

Understand It with Pulse | Flag a mistake

23 **The absolute value of -3 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **The binomial coefficient 5 choose 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The limit of a constant function f(x) = 7 as x approaches 5 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **A geometric sequence starts with 2 and has common ratio 4. Its 6th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **If f(x) = 1/(x - 1) , then f(3) is**

ANSWER

Understand It with Pulse | Flag a mistake

28 **The equation |x| = 5 has solutions**

A x = 5 only

B x = -5 only

C x = 5 or x = -5

D no solutions

Understand It with Pulse | Flag a mistake

29 **Pascal triangle row 1, 4, 6, 4, 1 gives the coefficients of $(x + y)^4$. The middle coefficient is**

ANSWER

Understand It with Pulse | Flag a mistake

30 **Squeezing x $\sin(\frac{1}{x})$ between -x and x shows its limit as x approaches 0 is**

ANSWER

Understand It with Pulse | Flag a mistake

31 **An infinite geometric series starts with 60 and has common ratio 0.5. Its sum is**

ANSWER

Understand It with Pulse | Flag a mistake

32 **For f(x) = $\frac{4}{x}$, the value of f(1) is**

ANSWER

Understand It with Pulse | Flag a mistake

33 **For the piecewise function defined by x + 1 when x < 0 and 2x when x ≥ 0, the value at x = 4 is**

ANSWER

Understand It with Pulse | Flag a mistake

34 **In the expansion of $(x + 2)^6$, the coefficient of x^2 is**

ANSWER

Understand It with Pulse | Flag a mistake

35 **The limit as x approaches 2 of 3x plus 1 is**

ANSWER

Understand It with Pulse | Flag a mistake

36 **An arithmetic sequence starts with 5 and has common difference 2. Its 10th term is**

ANSWER

Understand It with Pulse | Flag a mistake

37 **For the polynomial $f(x) = x^2 + 2x + 3$, the value of f(3) is**

ANSWER

Understand It with Pulse | Flag a mistake

38 **For the piecewise function defined by x + 1 when x < 0 and 2x when x ≥ 0, the value at x = -2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **The function f(x) = x² is continuous at x = 3**

A no

B yes

C only at 0

D never

Understand It with Pulse | Flag a mistake

41 **An arithmetic sequence starts with 10 and has common difference -2. Its 5th term is**

A 2

B 4

C 0

D 3

Understand It with Pulse | Flag a mistake

42 **A polynomial of degree 2 has at most this many real roots**

ANSWER _____

Understand It with Pulse | Flag a mistake

43 **For the piecewise function defined by x + 1 when x < 0 and 2x when x ≥ 0, the value at x = -6 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **The number of ways to arrange 4 different letters in a row is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **The limit as x approaches 4 of the constant function 5 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **An infinite geometric series starts with 90 and has common ratio 0.3333. Its sum is**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **A polynomial of degree 6 has at most this many real roots**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **For f(x) equals 4x, the value of f(1) is**

ANSWER

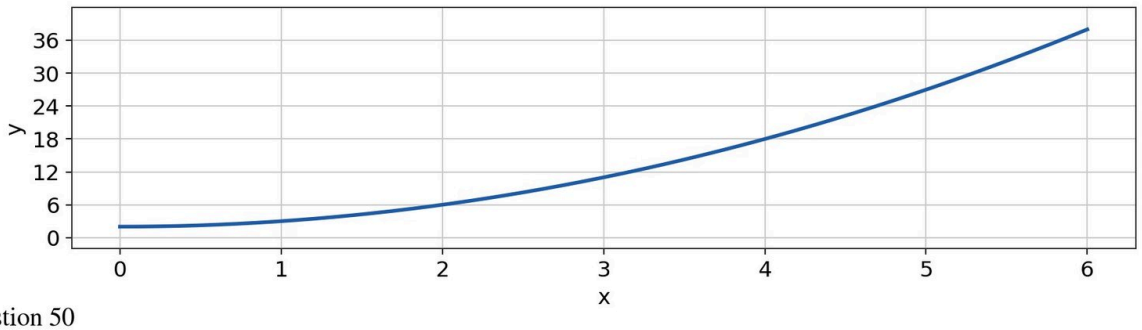
Understand It with Pulse | Flag a mistake

49 **The number of ways to select and arrange 3 books from 5 different books is**

ANSWER

Understand It with Pulse | Flag a mistake

50 **The graph shows a function. The value the function approaches as x approaches 2 is**



Question 50

The graph shows a function. The value the function approaches as x approaches 2 is

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	62	**18.**	36	**35.**	7
2.	22	**19.**	42	**36.**	23
3.	14	**20.**	2	**37.**	18
4.	72	**21.**	128	**38.**	-1
5.	C	**22.**	0.5	**39.**	210
6.	729	**23.**	3	**40.**	B
7.	2	**24.**	10	**41.**	A
8.	11	**25.**	7	**42.**	2
9.	35	**26.**	2048	**43.**	-5
10.	6	**27.**	0.5	**44.**	24
11.	160	**28.**	C	**45.**	5
12.	A	**29.**	6	**46.**	135
13.	8	**30.**	0	**47.**	6
14.	22100	**31.**	120	**48.**	4
15.	4	**32.**	4	**49.**	60
16.	243	**33.**	8	**50.**	6
17.	4	**34.**	240		

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