ARKANSAS PRECALCULUS · UNIT 4 · 25 QUESTIONS

Limits, Sequences, and Series — 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 $\lim_{x \to 2} (3x + 1)$ is

- A 7
- B 5
- C 6
- D 8

Understand It with Pulse | Flag a mistake

2 $\lim_{x \to 3} x^2$ is

- A 9
- B 6
- C 3
- D 12

Understand It with Pulse | Flag a mistake

3 $\lim_{x \to 1} \frac{x^2 - 1}{x - 1}$ is

A 0

B 1

C 2

D 3

Understand It with Pulse | Flag a mistake

4 $\lim_{x \to 0} \frac{\sin x}{x}$ is

A 0

B 2

C ∞

D 1

Understand It with Pulse | Flag a mistake

5 **The sequence 2, 5, 8, 11 is**

A Arithmetic

B Geometric

C Neither

D Both

Understand It with Pulse | Flag a mistake

6 **The common difference of 2, 5, 8, 11 is**



A 2

B 3

C 5

D 8

Understand It with Pulse | Flag a mistake

7 **The sequence 3, 6, 12, 24 is**

A Arithmetic

B Neither

C Geometric

D Both

Understand It with Pulse | Flag a mistake

8 **The common ratio of 3, 6, 12, 24 is**

A 3

B 6

C 12

D 2

Understand It with Pulse | Flag a mistake

9 **The 5th term of the arithmetic sequence with $a_1 = 4$ and $d = 3$ is**

A 16

B 13

C 19

D 10

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10 **The 4th term of the geometric sequence with $a_1 = 2$ and $r = 3$ is**



A 18

B 54

C 6

D 27

Understand It with Pulse | Flag a mistake

11 **The sum of the first 4 terms of 1 + 2 + 4 + 8 is**

- **A** 7
- **B** 11
- **C** 15
- **D** 31

Understand It with Pulse | Flag a mistake

12 The sum $1 + \frac{1}{2} + \frac{1}{4} + cdots$ to infinity is



A 1

B $\underline{3}$

C 3

D 2

Understand It with Pulse | Flag a mistake

13 $\lim_{x \to \infty} \frac{1}{x}$ is

A 0

B 1

C ∞

D -1

Understand It with Pulse | Flag a mistake

14 $\lim_{x \to 4} (x^2 - 5x + 2)$ is

A -6

B -2

C 2

D 6

Understand It with Pulse | Flag a mistake

15 **The sum of the first 10 positive integers is**



A 45

B 50

C 55

D 100

Understand It with Pulse | Flag a mistake

16 **The sum of the arithmetic series with $a_1 = 5$, $a_n = 25$, and $n = 5$ is**

A 50

B 60

C 65

D 75

Understand It with Pulse | Flag a mistake

17 $\lim_{x \to 2} x^2 - 4/x - 2$ **is**

A 8

B 2

C 4

D 0

Understand It with Pulse | Flag a mistake

18 The 6th term of 5, 10, 15, 20, … is



ANSWER _____

Understand It with Pulse | Flag a mistake

19 The sum of the first 5 terms of 2 + 4 + 6 + 8 + 10 is

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **For y = 1/x with x > 0, as x grows, y**

A Approaches 0

B Approaches 1

C Grows without bound

D Becomes negative

Understand It with Pulse | Flag a mistake

21 **If a limit from the left is 3 and from the right is 3, then the two sided limit is**

A 0

B 3

C 6

D Does not exist

Understand It with Pulse | Flag a mistake

22 **If a limit from the left is 2 and from the right is 5, then the two sided limit**

- **A** Is 2
- **B** Is 5
- **C** Does not exist
- **D** Is 7

Understand It with Pulse | Flag a mistake

23 **The sequence defined by $a_n = 2n + 1$ has a_4 equal to**

- **A** 7
- **B** 8
- **C** 11
- **D** 9

Understand It with Pulse | Flag a mistake

24 The sequence defined by $a_n = n^2$ has a_5 equal to

- A 25
- B 10
- C 15
- D 20

Understand It with Pulse | Flag a mistake

25 The sum $\sum_{k=1}^{4} k$ is

- A 4
- B 10
- C 6
- D 8

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. A
3. C
4. D
5. A
6. B
7. C
8. D
9. A
10. B
11. C
12. D
13. A
14. B
15. C
16. D
17. C
18. 30
19. 30
20. A
21. B
22. C
23. D
24. A
25. B

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