Limits, Sequences, and Series - Practice Test | Missouri Precalculus

Practice Test

Unit 4: Limits, Sequences, and Series

10 Questions

Original practice test based on the Missouri curriculum. Work through each question, then check your answers at the end.

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.

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Question 1

In an arithmetic sequence with $a_1 = 10$ and common difference -2, the sixth term is

A) 0

B) 2

C) -2

D) 20

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Question 2

The sum of the first 5 terms of an arithmetic sequence with $a_1 = 1$ and common difference 2 is

A) 20

B) 25

C) 30

D) 15

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Question 3

In a geometric sequence with $a_1 = 5$ and common ratio 2, the fourth term is

A) 20

B) 30

C) 80

D) 40

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Question 4

The sum of the infinite geometric series with $a_1 = 20$ and $r = \frac{1}{4}$ is

A) 25

B) $\frac{80}{3}$

C) 24

D) 80

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Question 5

The sum $\sum_{k=1}^{3} (k + 2)$ is

A) 9

B) 10

C) 12

D) 11

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Question 6

The sequence $2,\ 6,\ 18,\ 54$ has common ratio

A) 2

B) 3

C) 4

D) 6

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Question 7

The limit of the sequence $a_n = \frac{3n+2}{n}$ as $n \to \infty$ is

A) 0

B) 2

C) 3

D) 5

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Question 8

The sum of the first 4 terms of $1,\ 4,\ 9,\ 16$ is ____.

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Question 9

For $a_n = n^2 + 2n$, the fourth term is ____.

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Question 10

The limit $\lim_{x \to 3}(4x - 5)$ is ____.

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ANSWER KEY

1. A
2. B
3. D
4. B
5. C
6. B
7. C
8. 30
9. 24
10. 7

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