MARYLAND PRECALCULUS · UNIT 4 · 10 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** **In an arithmetic sequence with $a_1 = 10$ and common difference -2, the sixth term is**

- A 0
- B 2
- C -2
- D 20

Understand It with Pulse | Flag a mistake

**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

Understand It with Pulse | Flag a mistake

**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

Understand It with Pulse | Flag a mistake

**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

Understand It with Pulse | Flag a mistake

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

- A 9
- B 10
- C 12
- D 11

Understand It with Pulse | Flag a mistake

**6** The sequence 2, 6, 18, 54 has common ratio

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

Understand It with Pulse | Flag a mistake

**7** The limit of the sequence $a_n = 3n + 2/n$ as $n \to \infty$ is

- A 0
- B 2
- C 3
- D 5

Understand It with Pulse | Flag a mistake

**8** The sum of the first 4 terms of 1, 4, 9, 16 is ____.

ANSWER _____

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

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER

Understand It with Pulse | Flag a mistake

## ANSWER KEY

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

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