

Name: _____

Mark: _____

Mini-math AP Calculus BC: Friday, October 8, 2021 (8 minutes)

1. (1 point) Which of the following conclusions can be drawn about the series $\sum_{n=1}^{\infty} \frac{\cos(n\pi)}{\sqrt{n}}$? The

Alternating Series Test:

- A. is inconclusive because the terms are not alternating
- B. is inconclusive because the absolute value of the terms do not limit to 0
- C. is inconclusive because the absolute value of the terms is not decreasing
- D. applies and the series converges

2. (2 points) Does the following series converge or diverge?

$$\sum_{n=1}^{\infty} \frac{9^n(n+1)}{4^{2n-1}}$$

3. (2 points) Does the following series converge or diverge?

$$\sum_{n=1}^{\infty} \frac{(-2)^{3n}}{7^n \ln n}$$