

**Math 2300**  
**Spring 2026**  
**Quiz 10**

**Name:** \_\_\_\_\_

1. (5 points) Consider the series

$$\sum_{n=1}^{\infty} (-1)^n \frac{1}{\sqrt[3]{n}}.$$

Does the series converge absolutely, converge conditionally, or diverge? Fully justify your answer by stating any test(s) used, verifying that the series satisfies the conditions of the test, and clearly explaining each step leading to your conclusion.

2. (5 points) Determine whether the series

$$\sum_{n=1}^{\infty} \frac{2^n}{(2n)!}$$

converges or diverges. Fully justify your answer by stating any test(s) used, verifying that the series satisfies the conditions of the test, and clearly explaining each step leading to your conclusion.