

NAME _____

SECTION _____

1. The first term of a geometric series is 6 and the third term is $\frac{2}{3}$. What is the sum of this series? Give reasoning supporting your answer.

2. Does the series $\sum_{n=1}^{\infty} \frac{3}{\sqrt{n} + 5^n}$ converge? Give reasoning supporting your answer.

3. Does the series $\sum_{n=1}^{\infty} \left(1 + \frac{(-1)^n}{n^2}\right)$ converge? Give reasoning supporting your answer.