Date: February 13, 2024, Tuesday NAME:.....

STUDENT NO:.....

DEPARTMENT:.....

Math 102 Spring 2024 – QUIZ # 1

Do either (Q1) or (Q2):

(Q1) Assume that $s_N = \frac{5N^4+4N+7}{7N^4+\sqrt{N^2+1}+100}$ is the N^{th} partial sum of the series $\sum_{n=1}^{\infty} a_n$

(a) Does the series $\sum_{n=1}^{\infty} a_n$ coverge or diverge?

(b) Find $\lim_{n\to\infty} a_n$.

(Q2) Assume that $s_N = \frac{e-e\pi^{N+1}}{1-\pi}$ is the N^{th} partial sum of the series $\sum_{n=1}^{\infty} a_n$

(a) Find a_n.

(b) Does the series $\sum_{n=1}^{\infty} a_n$ coverge or diverge?