

Quiz 4 — 09/28/17

Name: _____ Section and/or TA: _____

Answer all questions in a clear and concise manner. Unsupported answers will receive *no credit*.

1. (2 points) Find the limit of the sequences $\{a_n\}_{n=1}^{\infty}$ defined as follows

(a) (1 point) $a_n = \frac{2n^2 + 6n - 25}{7n^2 + 100n - 3456}$

(b) (1 point) $a_1 = 3, a_n = 6 - a_{n-1}$ for $n \geq 2$.

2. (1 point) Find $\sum_{n=0}^{\infty} \frac{3^n}{5^n}$.

3. (1 point) True or False: The series $\sum_{n=1}^{\infty} a_n$ converges if $\lim_{n \rightarrow \infty} a_n = 0$.

4. (1 point) True or False: Let $\{s_n\}$ be the sequence of partial sums of the series $\sum_{n=1}^{\infty} a_n$. If $\{s_n\}$ diverges, then $\sum_{n=1}^{\infty} a_n$ diverges.