

Quiz 11.1 - 11.7

Form A (2 pts. per problem #1-8)

20 pts.

Name: _____

Per.: _____

- 1) Does this sequence converge or diverge?
 _____ If it converges, find limit.

$$\left\{ \begin{array}{l} 6n^2 - 1 \\ 7n + 1 \end{array} \right\}$$

- 2) Does this sequence converge or diverge?
 _____ If it converges, find limit.

$$\left\{ \begin{array}{l} 5n^3 - n^2 \\ 3n^3 + 1 \end{array} \right\}$$

For #3 - 8, state (a) converges or diverges and (b) how you know (e.g., test or series name). Do NOT find sums.

- 3)
$$\sum_{n=1}^{\infty} \left(\frac{4n-1}{3n+5} \right)^n$$
 a) _____
 b) _____

- 4)
$$\sum_{n=1}^{\infty} n e^{-n^2}$$
 a) _____
 b) _____

- 5)
$$\sum_{n=1}^{\infty} \sqrt{\frac{1}{n^5}}$$
 a) _____
 b) _____

- 6)
$$\sum_{n=1}^{\infty} (-1)^n \left(\frac{8n-n^2}{3n} \right)$$
 a) _____
 b) _____

- 7)
$$\sum_{n=1}^{\infty} \frac{1}{3^n + 2}$$
 a) _____
 b) _____

- 8)
$$\sum_{n=1}^{\infty} \frac{e^n}{n!}$$
 a) _____
 b) _____

- 9) Does the following series converge or diverge? If it converges, determine if it converges absolutely or conditionally? *Show all work and name tests used.* (4 pts.)

$$\sum_{n=1}^{\infty} \frac{(-1)^n}{\sqrt{n(n+1)}}$$