

Name: _____

Section: _____

Math 10560, Quiz 8

April 4, 2017

- The Honor Code is in effect for this quiz. All work is to be your own.
- Please turn off all cellphones and electronic devices.
- Calculators are NOT allowed
- The quiz lasts for 10 min.

PLEASE MARK YOUR ANSWERS WITH AN X, not a circle!

1. (a) (b) (c) (d) (e)

2. (a) (b) (c) (d) (e)

.....

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Multiple Choice

1.(2 pts.) The series

$$\sum_{n=2}^{\infty} \frac{(-1)^{n+1}}{\sqrt{n}}$$

- (a) diverges because it is a p-series with $p < 1$.
- (b) diverges because $\lim_{n \rightarrow \infty} \frac{(-1)^{n+1}}{\sqrt{n}} \neq 0$.
- (c) converges by the alternating series test.
- (d) converges because it is a p-series with $p < 1$.
- (e) diverges because the terms alternate.

2.(2 pts.) Use Comparison Tests to determine which **one** of the following series is divergent.

- (a) $\sum_{n=1}^{\infty} \frac{n}{n+1} \left(\frac{1}{2}\right)^n$
- (b) $\sum_{n=1}^{\infty} \frac{1}{n^{\frac{3}{2}} + 1}$
- (c) $\sum_{n=1}^{\infty} \frac{1}{n^2 + 8}$
- (d) $\sum_{n=1}^{\infty} \frac{n^2 - 1}{n^3 + 100}$
- (e) $\sum_{n=1}^{\infty} 7 \left(\frac{5}{6}\right)^n$